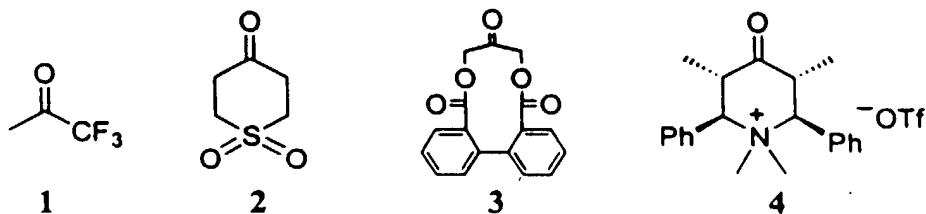


Fig. 1

ketones:



steroids:

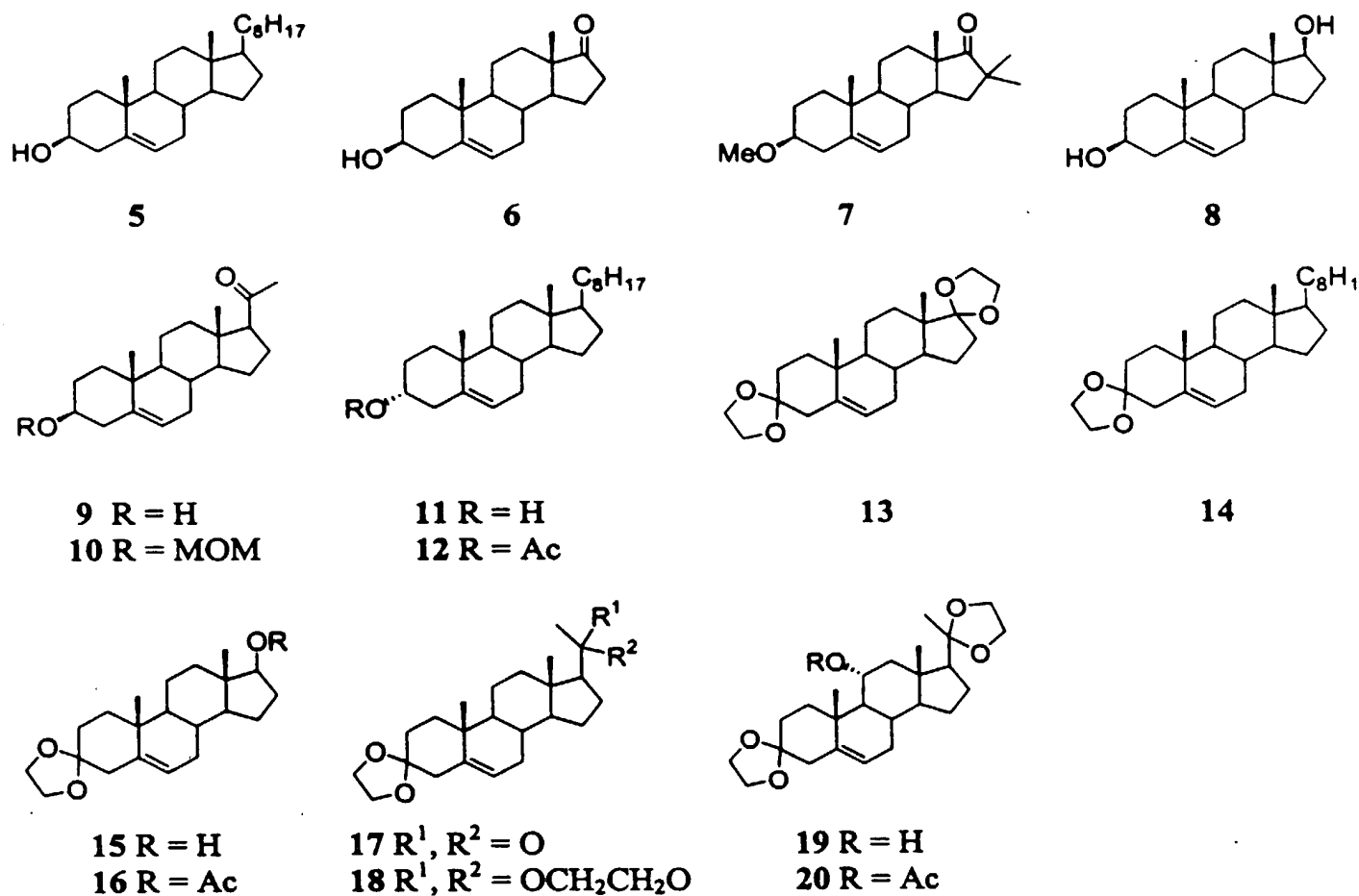
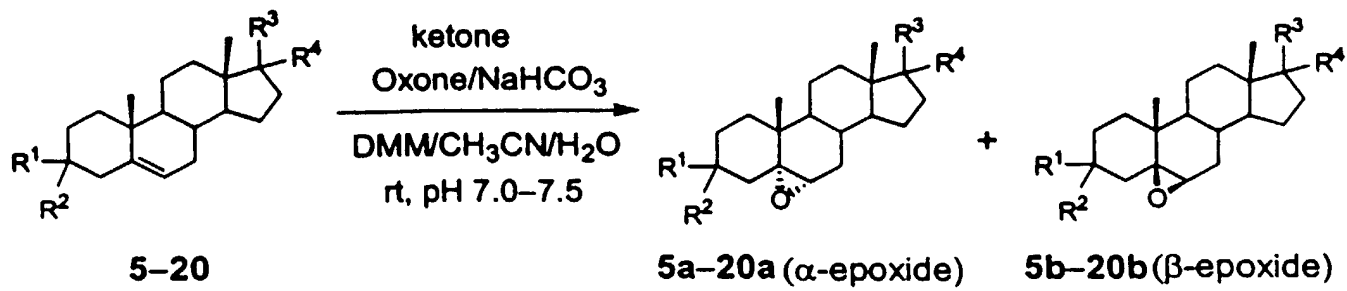


Fig. 2

**Fig. 3**

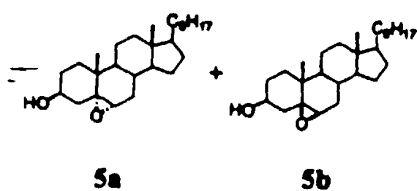


Table 1, Entry 4

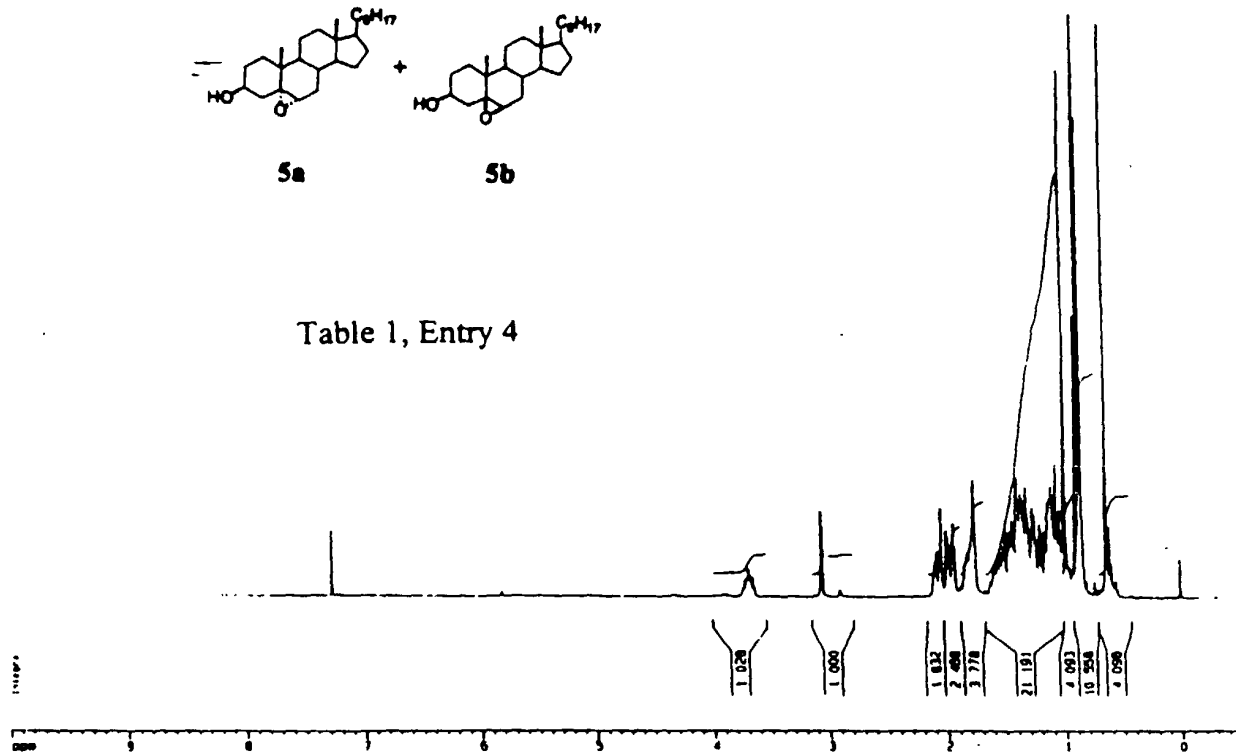


Fig. 4

Authentic samples of 5a/5b

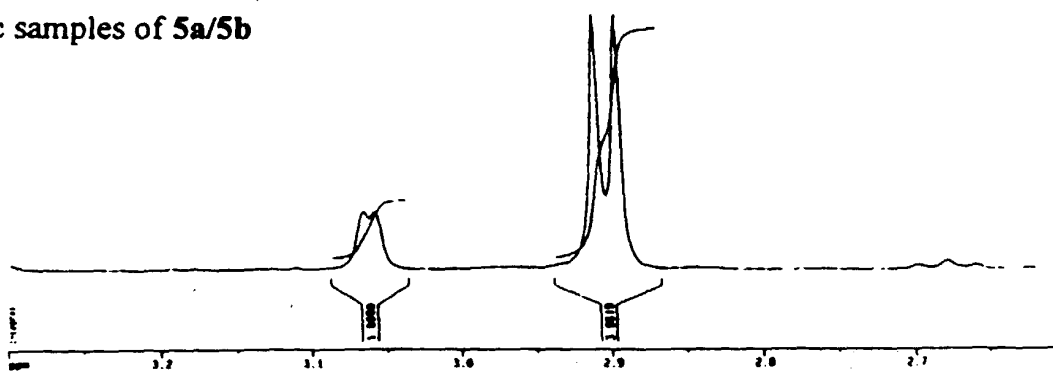


Fig. 5

Table 1, Entry 1

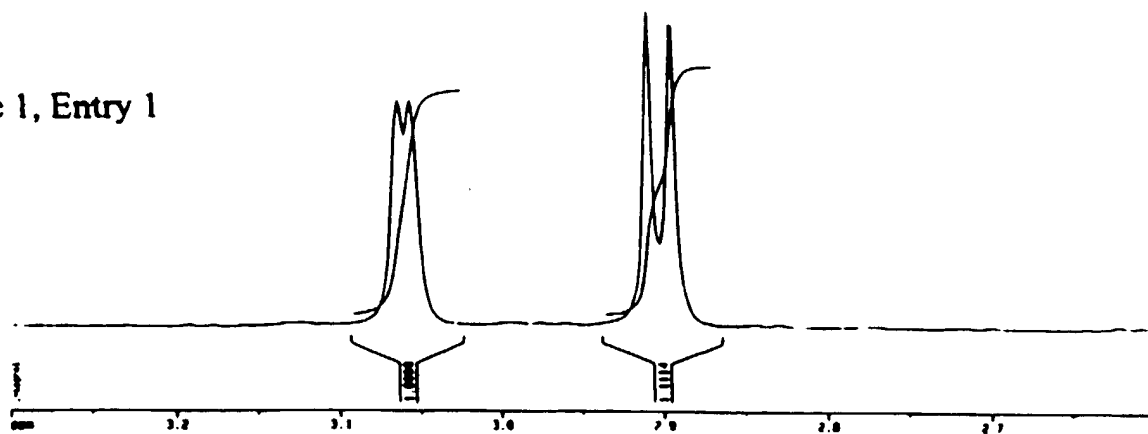


Fig. 6

Table 1, Entry 2

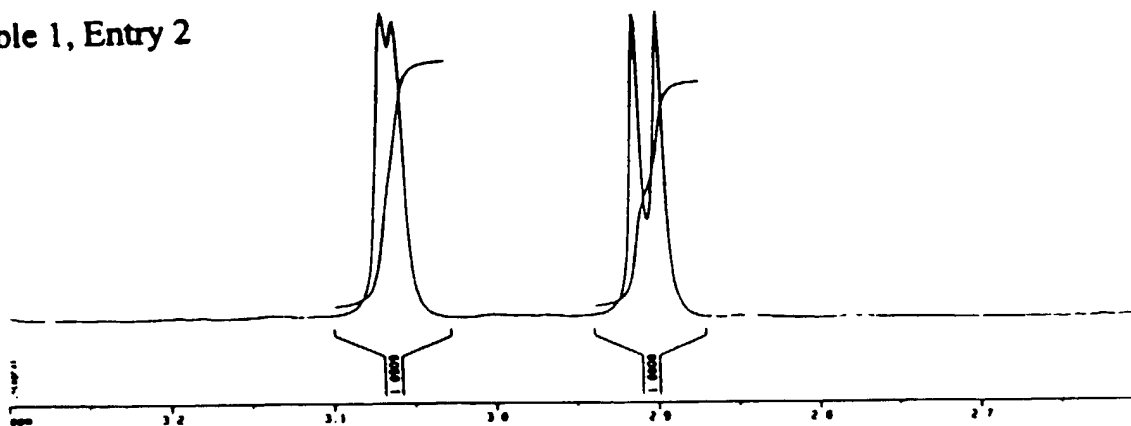


Fig. 7

Table 1, Entry 3

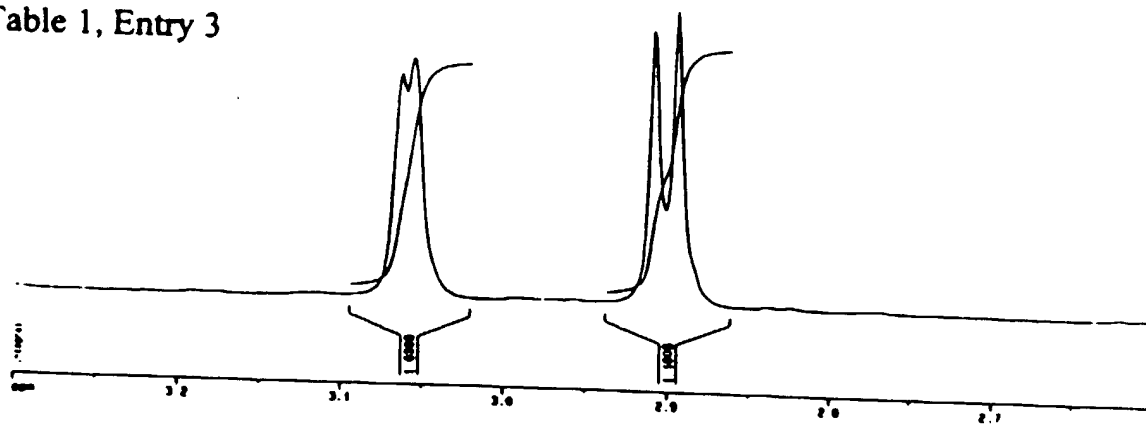


Fig. 8

Table 1, Entry 4

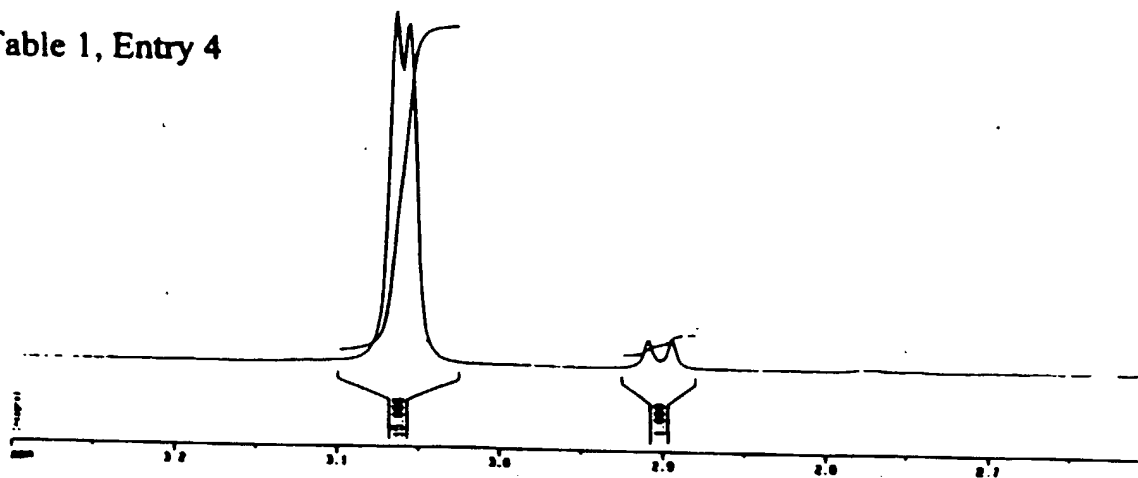


Fig. 9

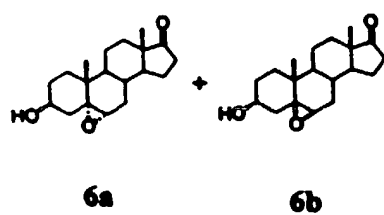


Table 1, Entry 5

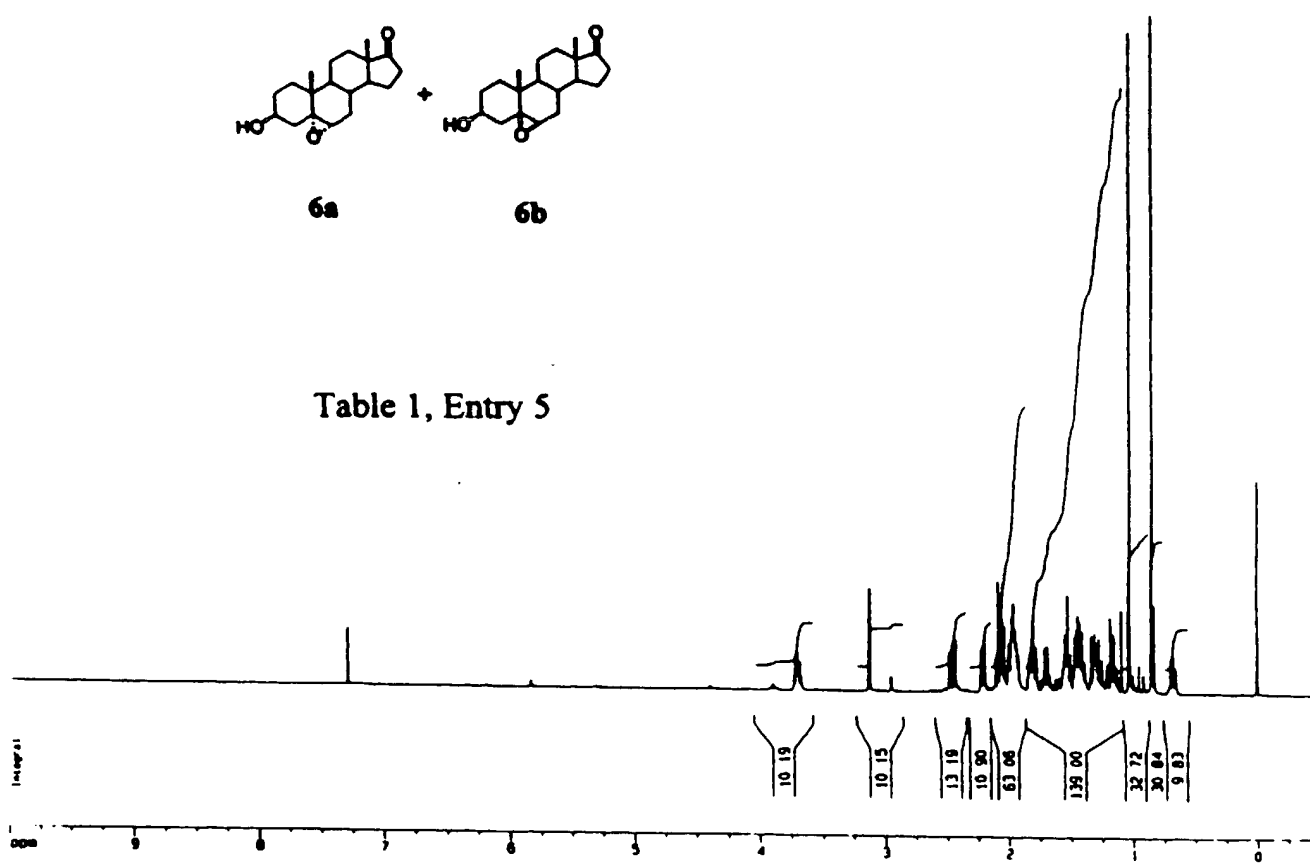


Fig. 10

Authentic samples of 6a/6b

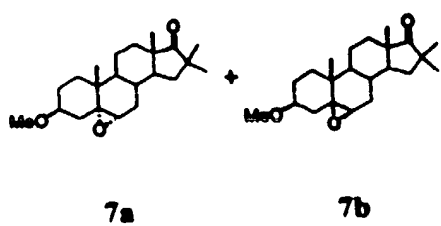


Table 1, Entry 6

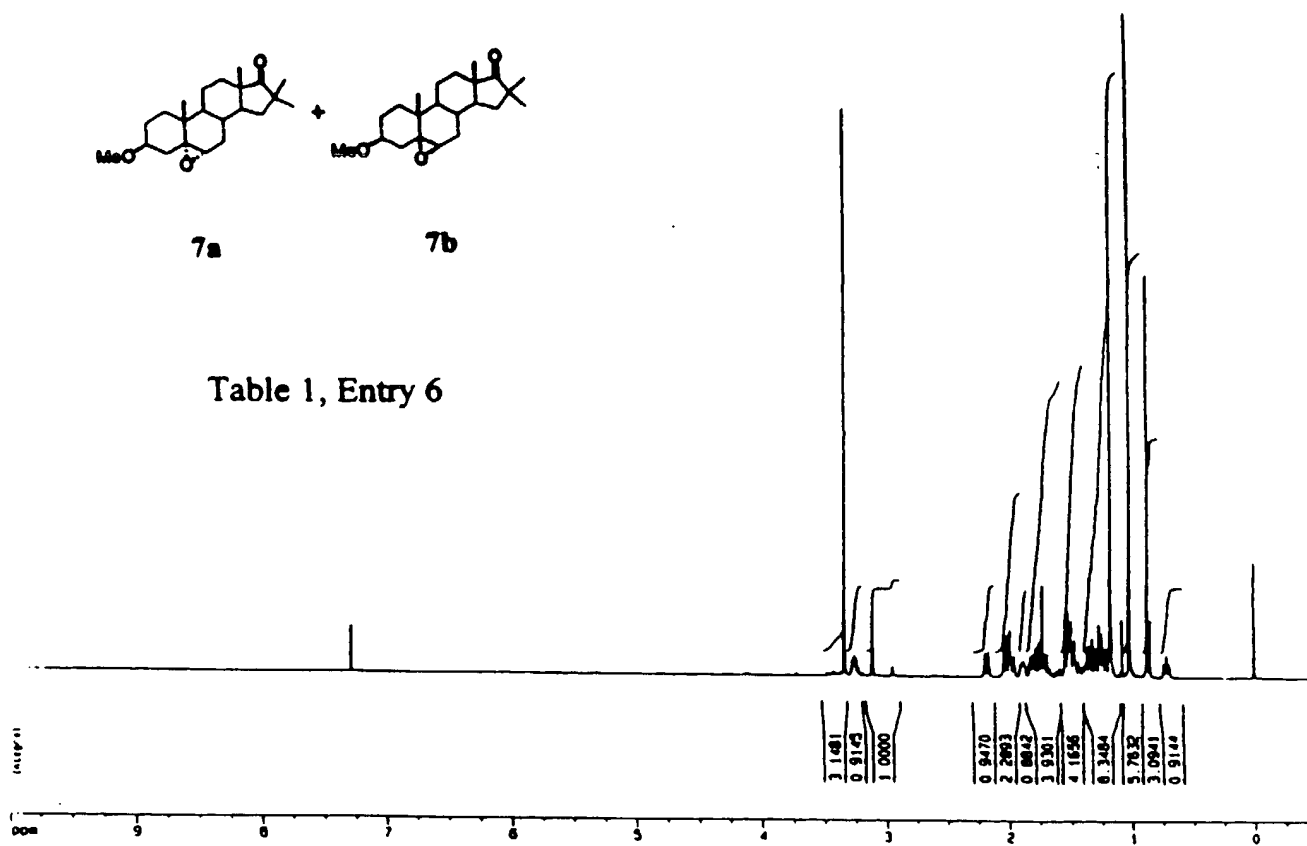


Fig. 13

Authentic samples of 7a/7b

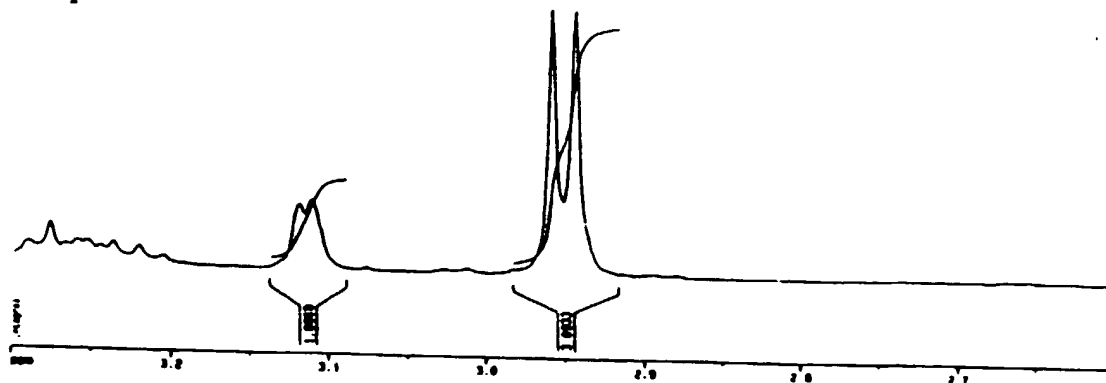


Fig. 14

Table 1, Entry 6

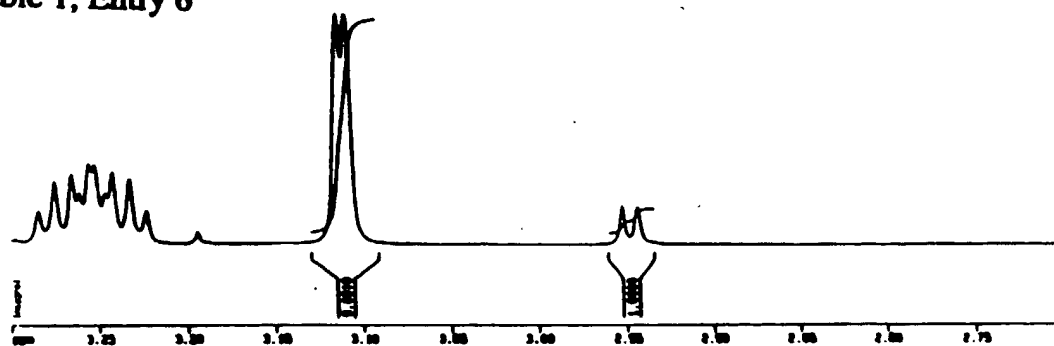


Fig. 15

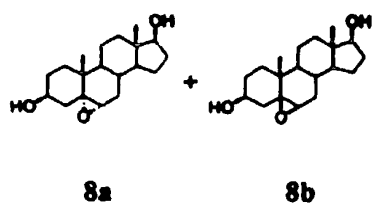


Table 1, Entry 7

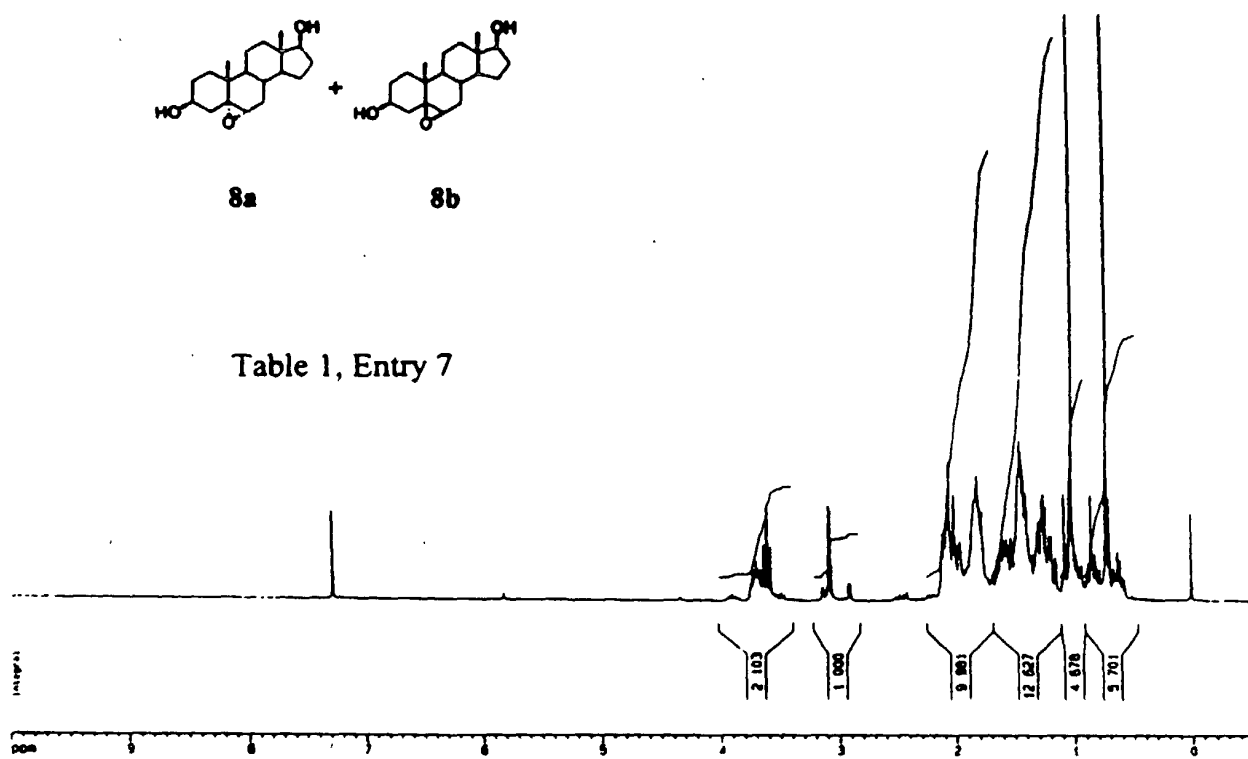


Fig. 16

Authentic samples of 8a/8b

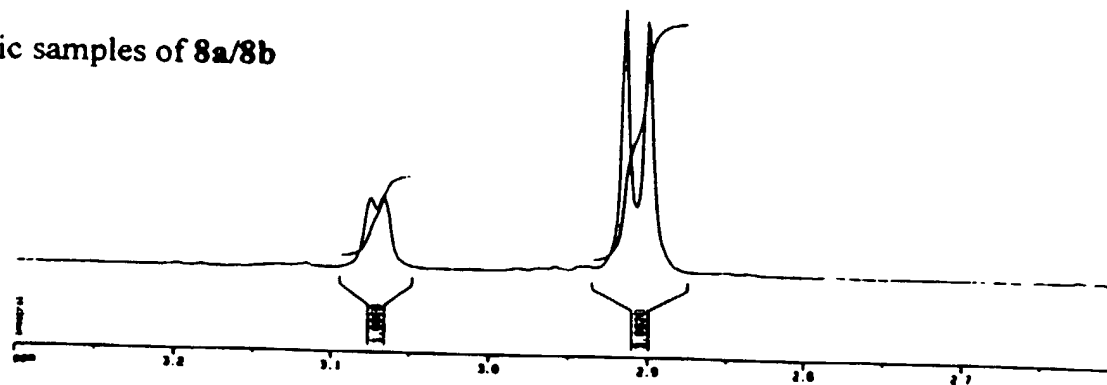


Fig. 17

Table 1, Entry 7

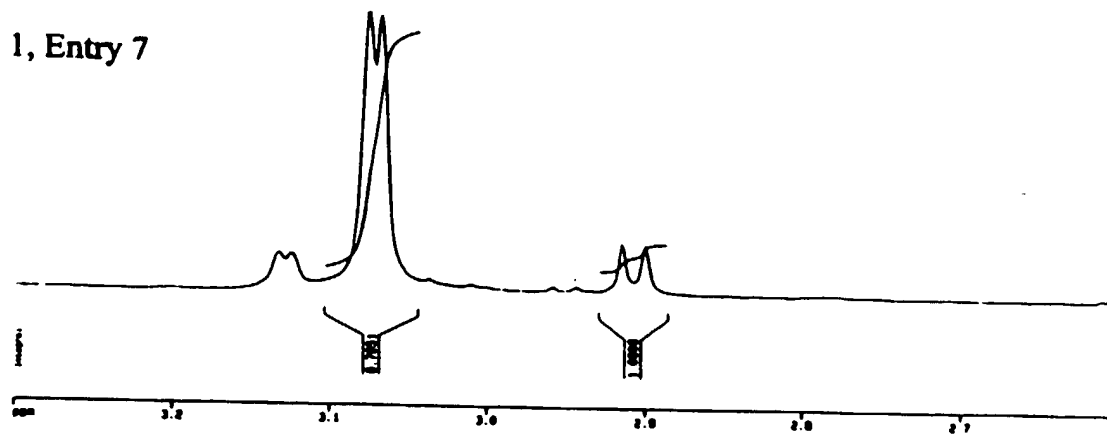


Fig. 18

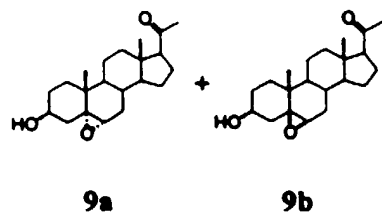


Table 1, Entry 8

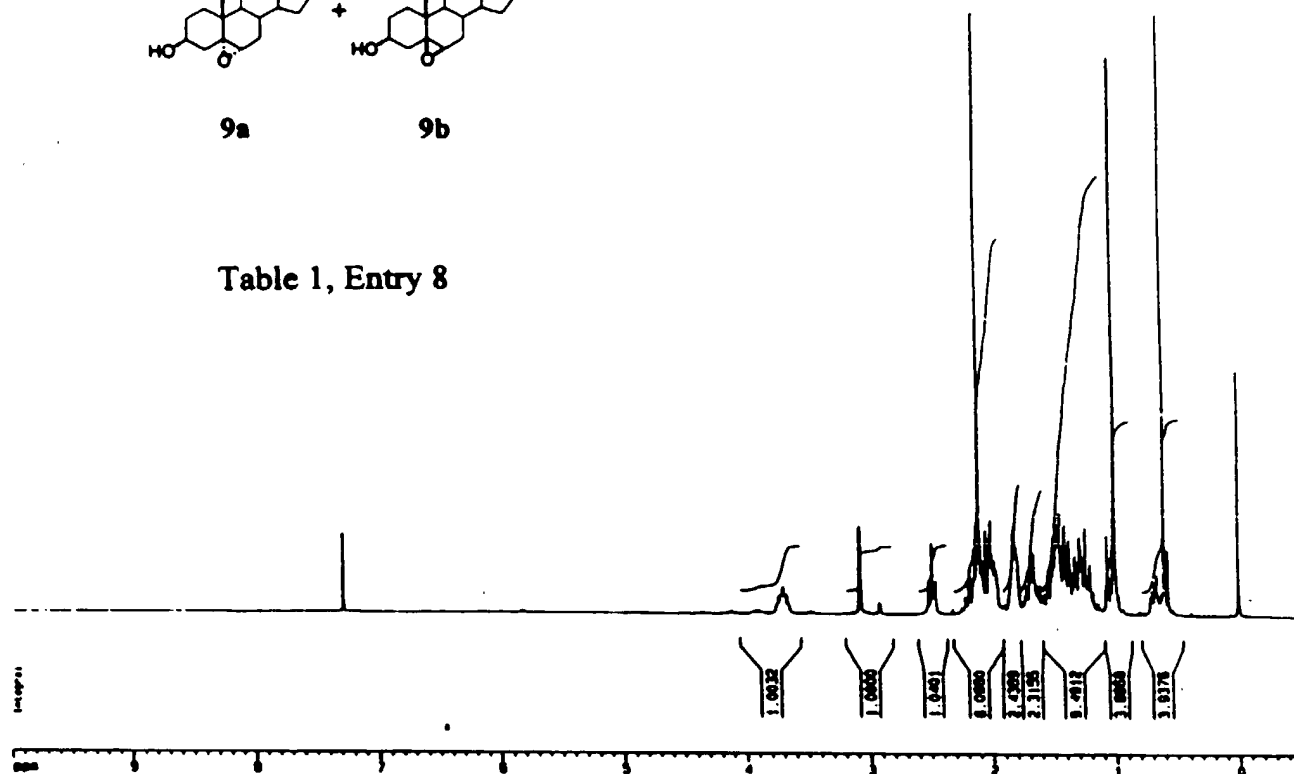


Fig. 19

Authentic samples of 9a/9b

Table 1, Entry 9
(10 mmol scale)

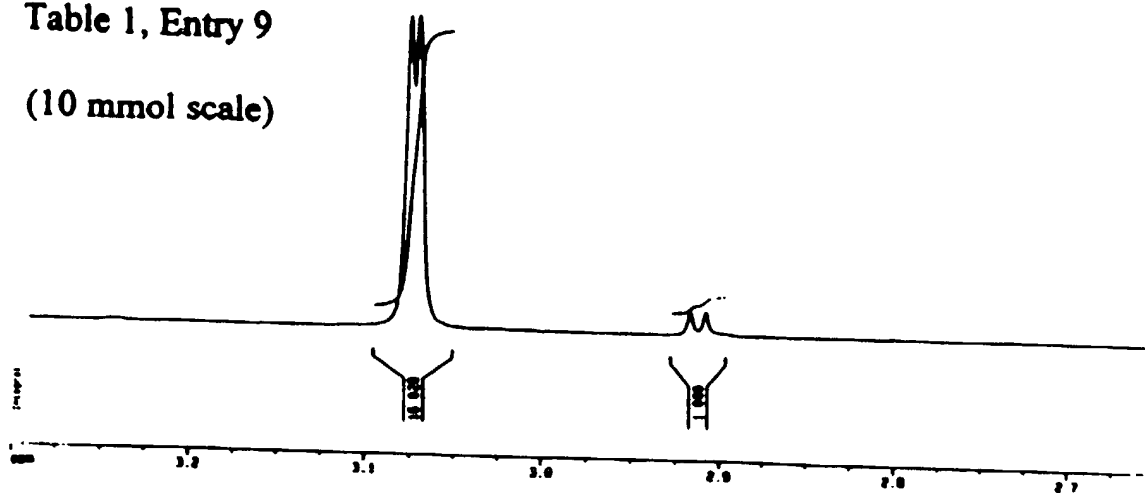


Fig. 22

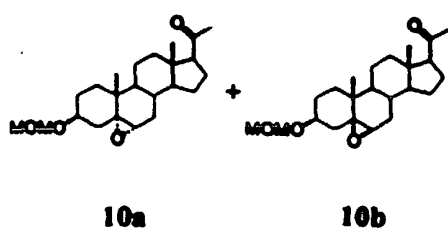


Table 1, Entry 10

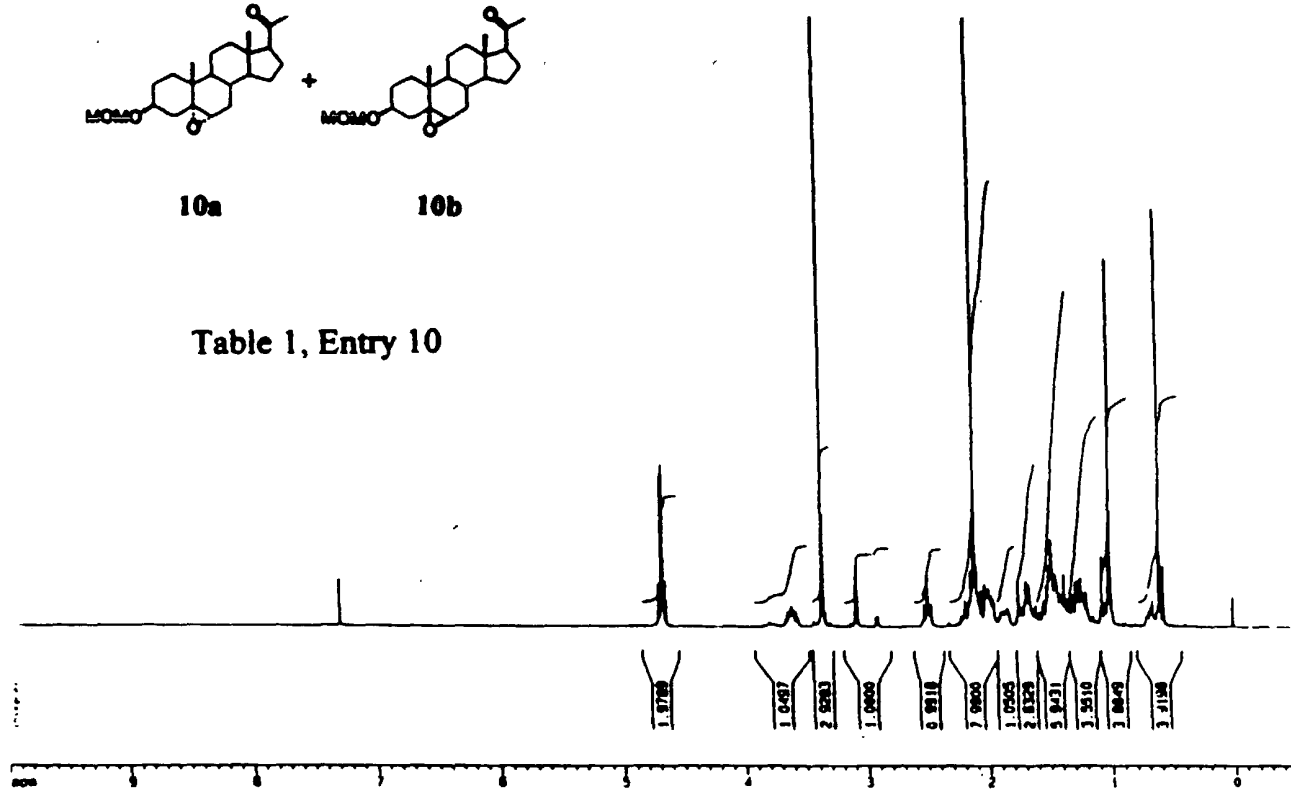


Fig. 23

Authentic samples of 10a/10b

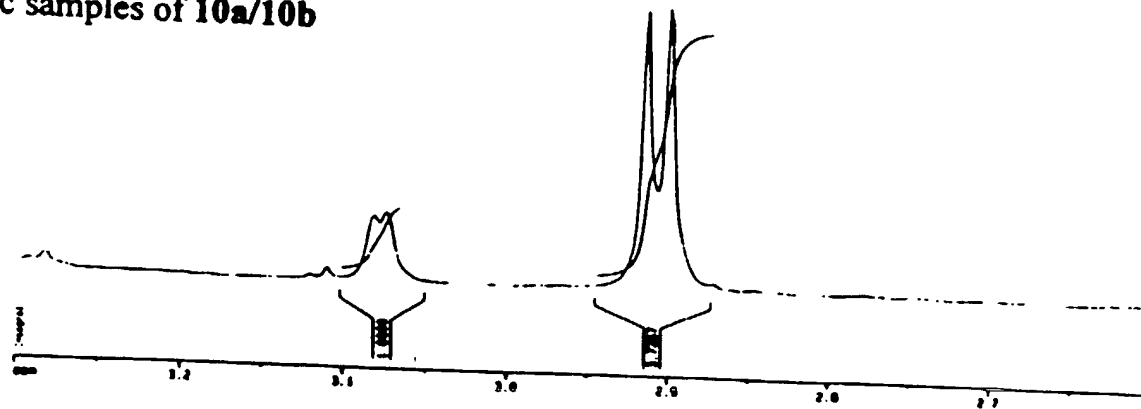


Fig. 24

Table 1, Entry 10

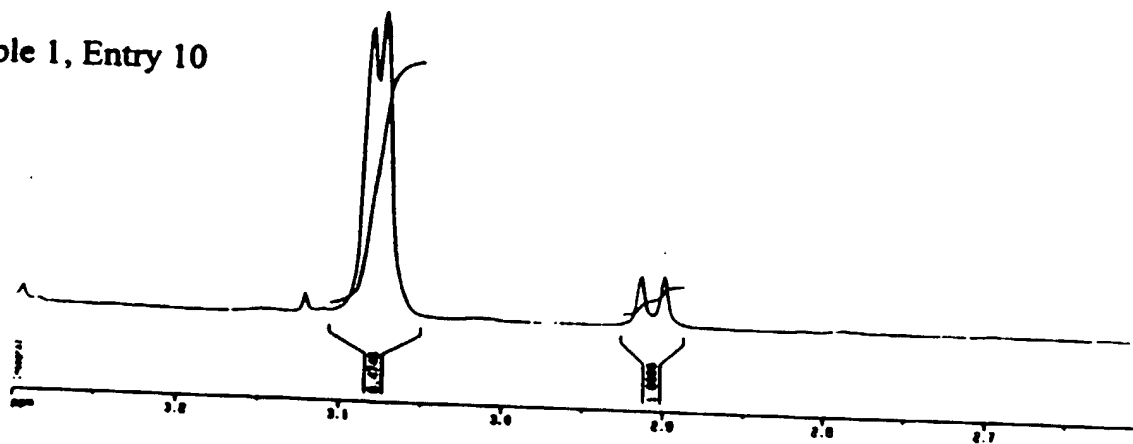


Fig. 25

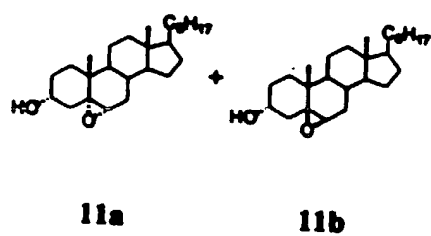


Table 2, Entry 2

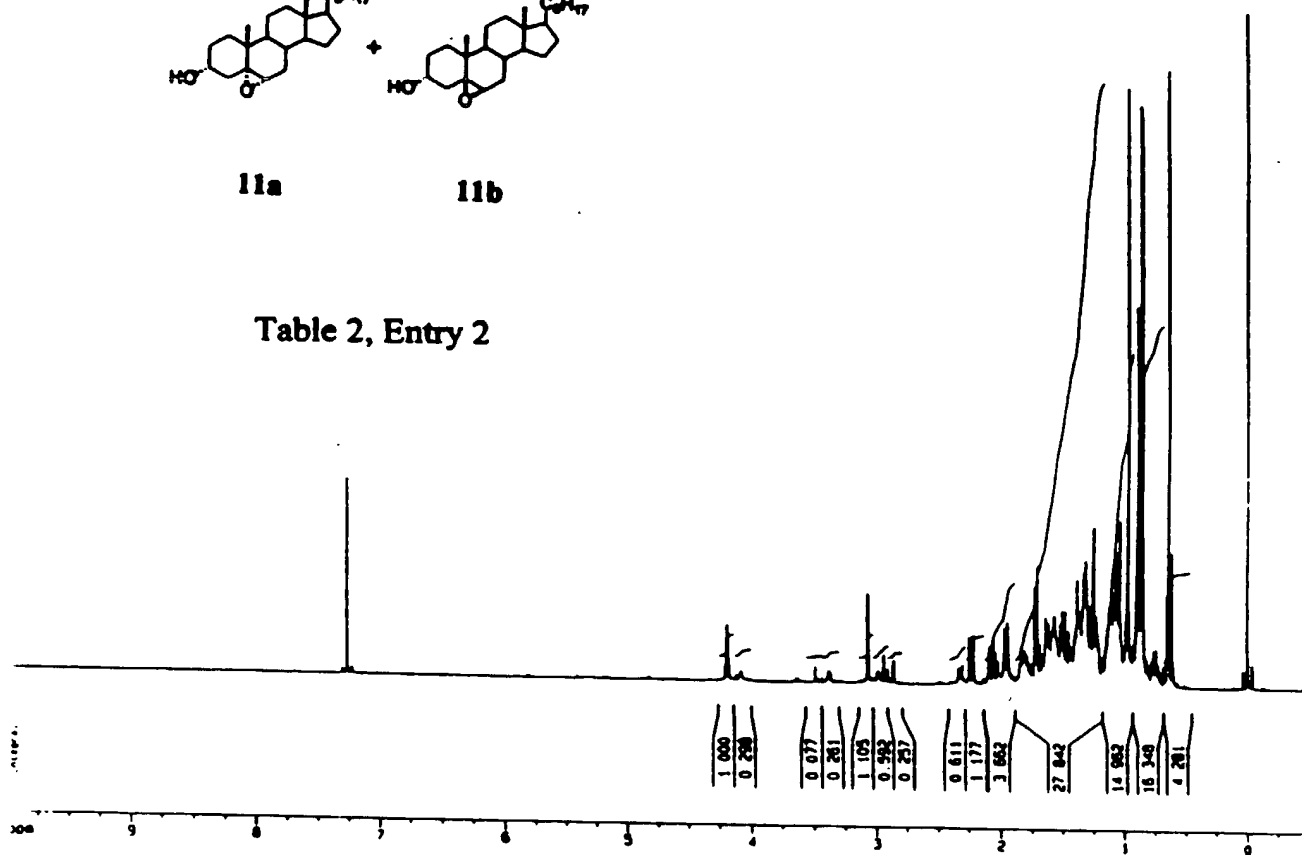


Fig. 26

Authentic samples of 11a/11b

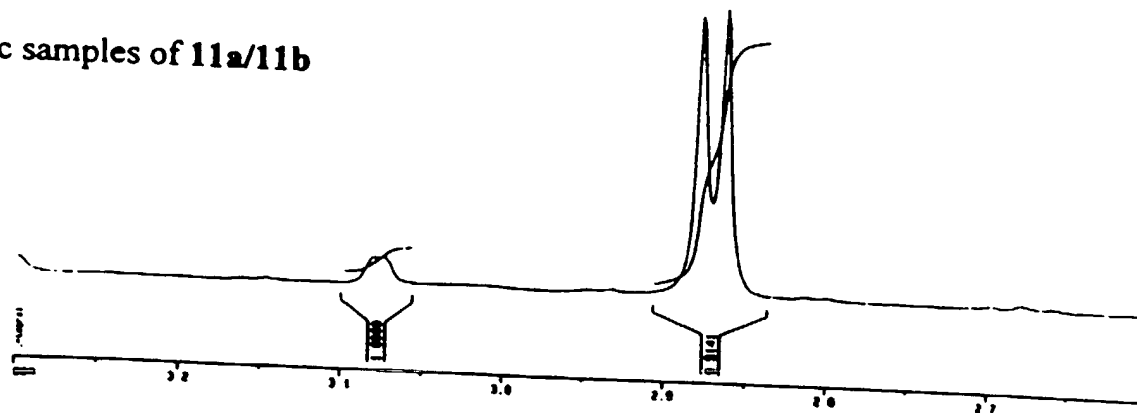


Fig. 27

Table 2, Entry 1

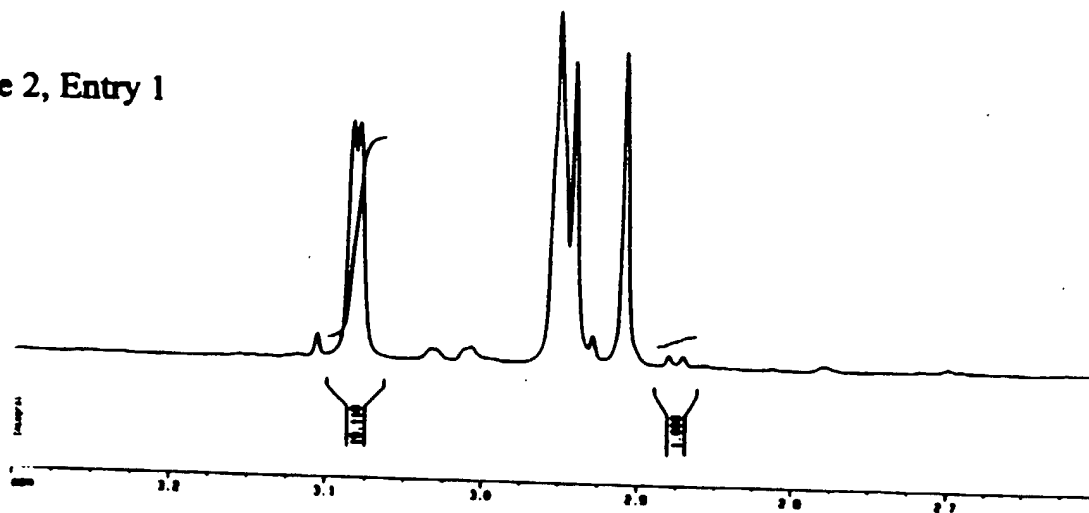


Fig. 28

Table 2, Entry 2

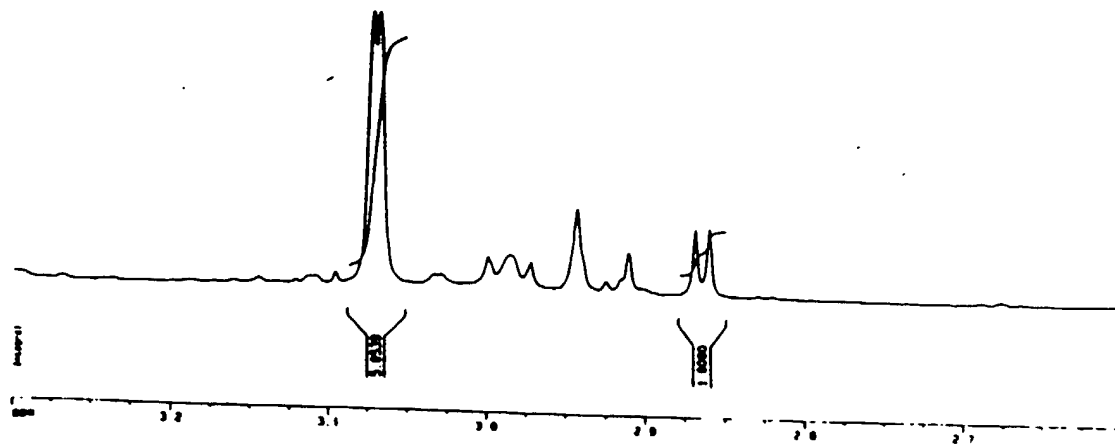


Fig. 29

Table 2, Entry 3

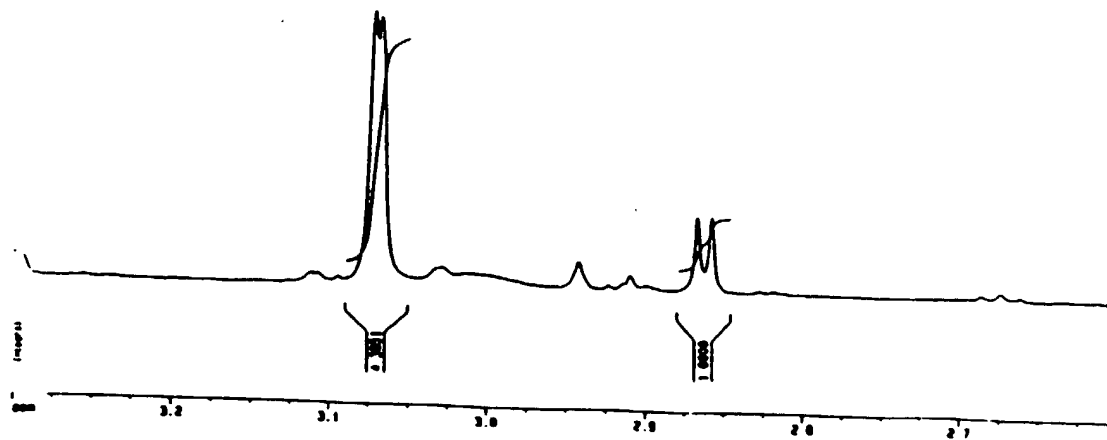


Fig. 30

Table 2, Entry 4

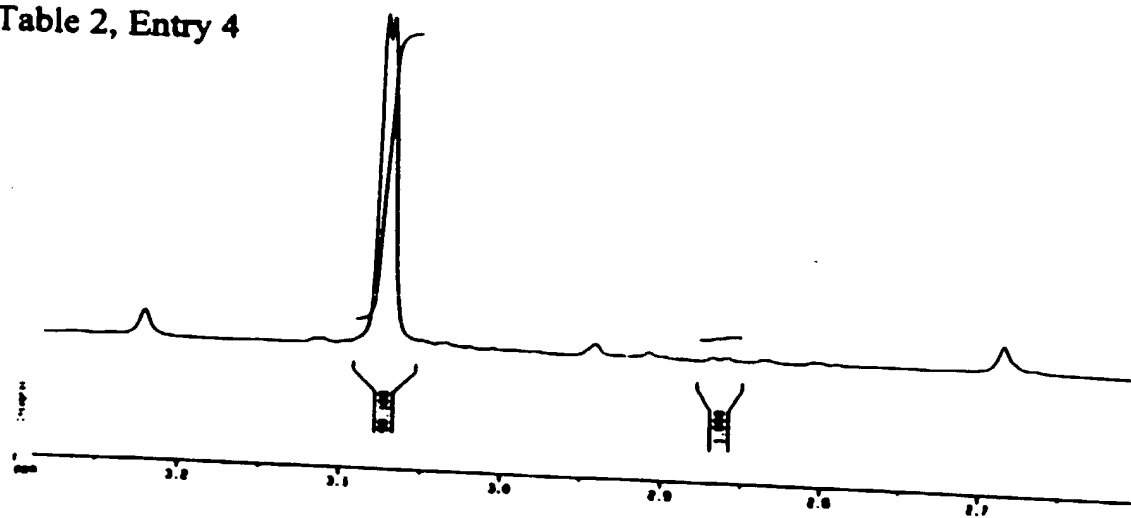
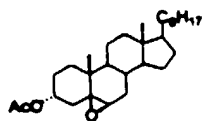


Fig. 31



12b

Table 2, Entry 5

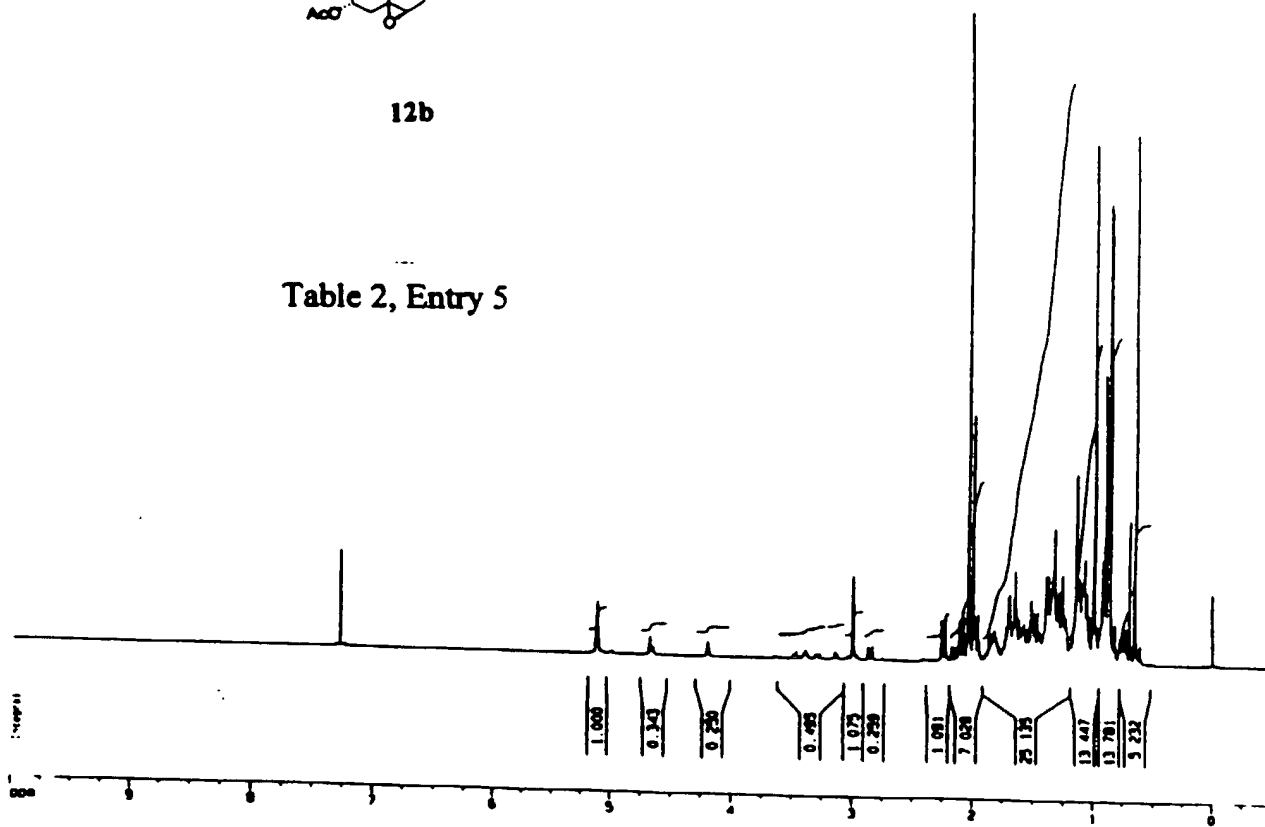


Fig. 32

**Authentic samples
of 12a/12b**

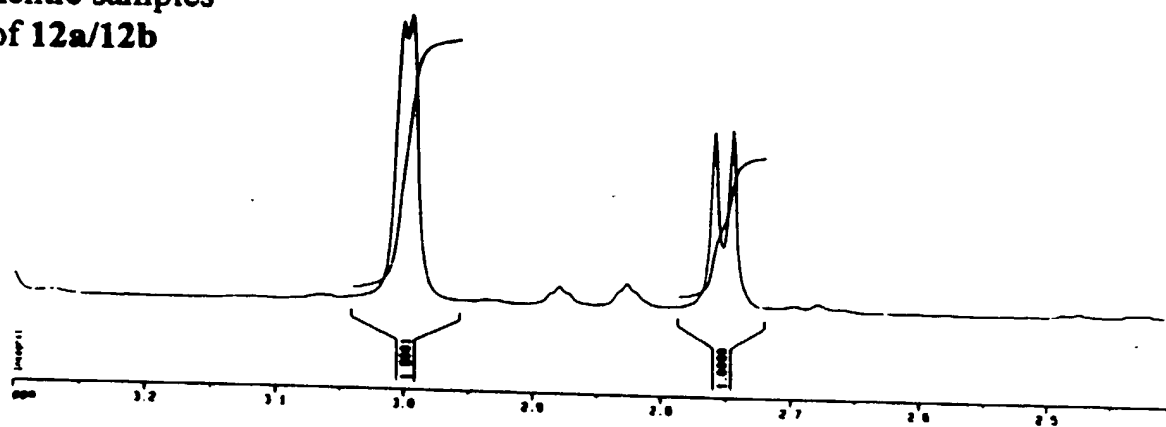


Fig. 33

1H NMR spectrum of 2,2,4,4-tetramethyl-5-oxohexanoic acid in CDCl₃. The spectrum shows a broad peak at ~11.5 ppm (OH), a multiplet at ~7.2 ppm (CH), and a multiplet at ~2.1 ppm (CH₂). Integration values are 7.00 and 1.00.

Fig. 34

Table 2, Entry 6

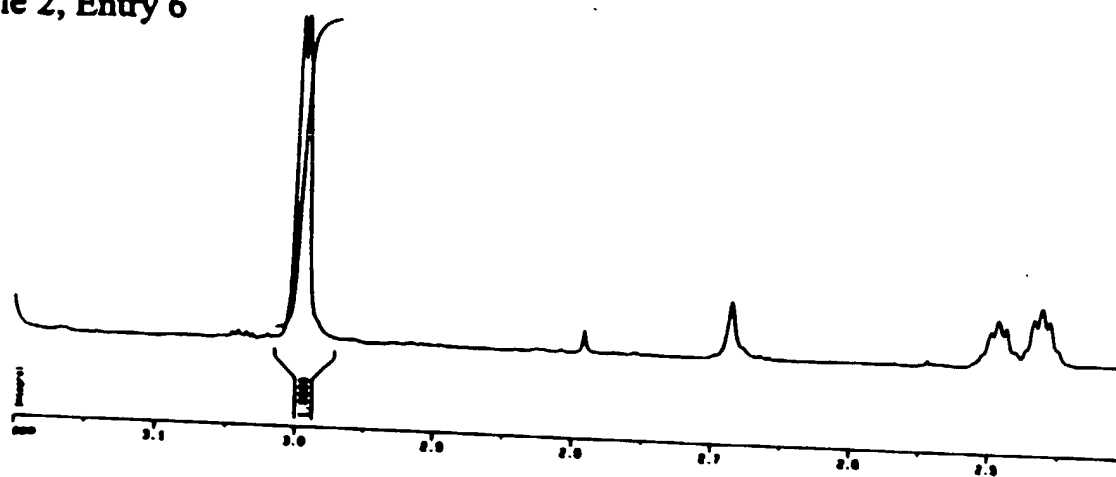
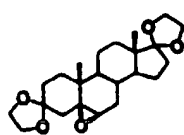


Fig. 35



13b

Table 2, Entry 8

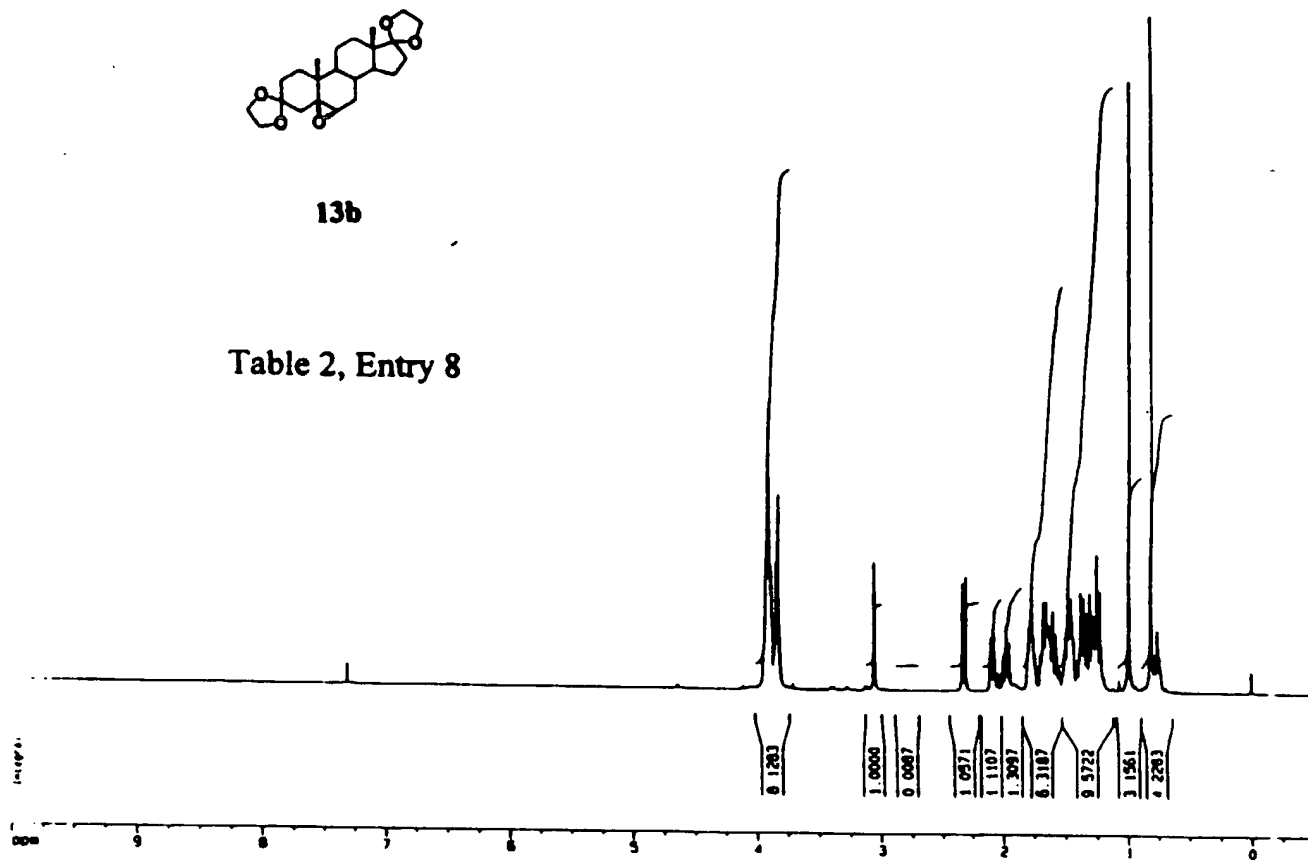


Fig. 36

Fig. 39

Table 2, Entry 9

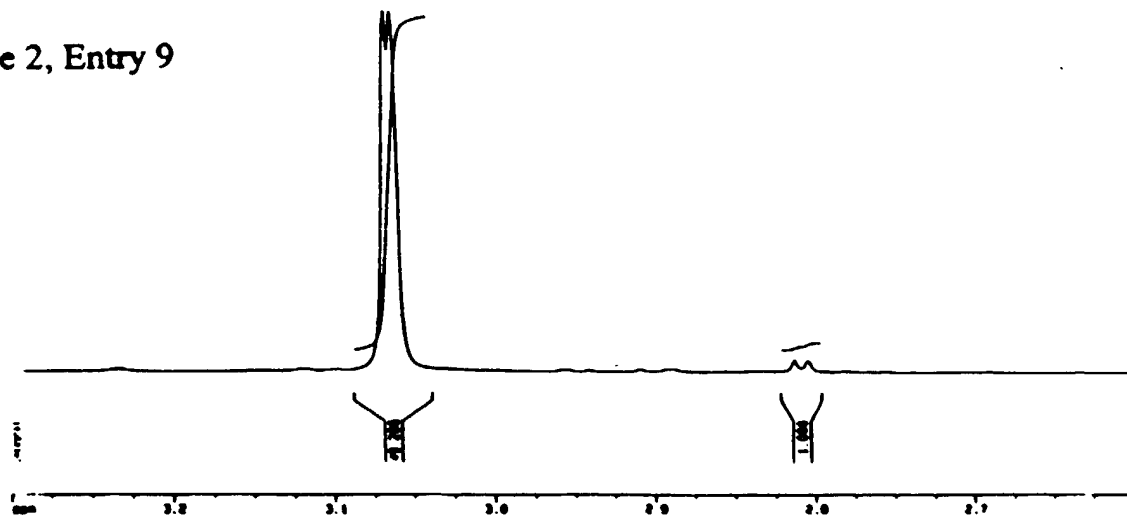


Fig. 40

Table 2, Entry 10

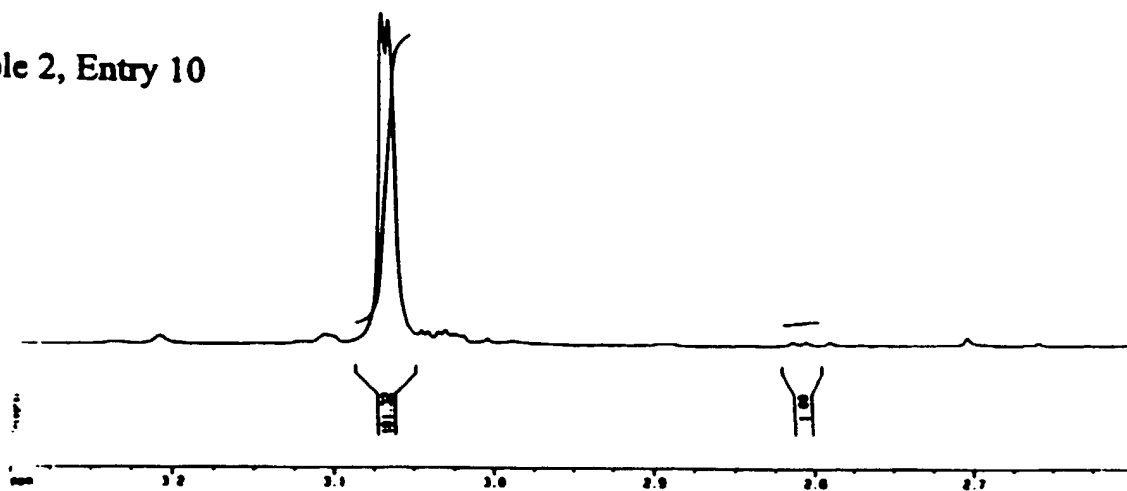
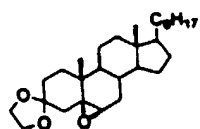


Fig. 41



14b

Table 2, Entry 11

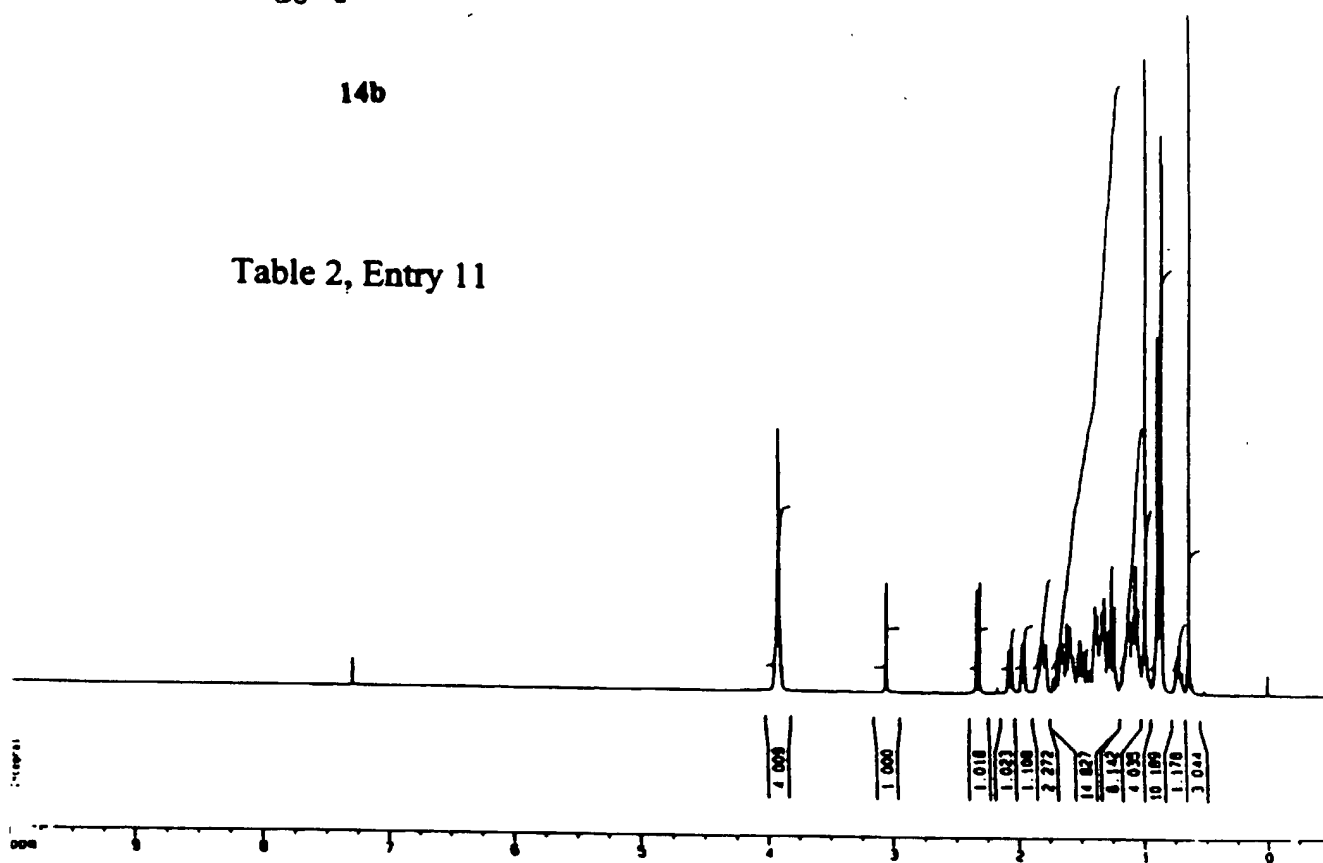


Fig. 42

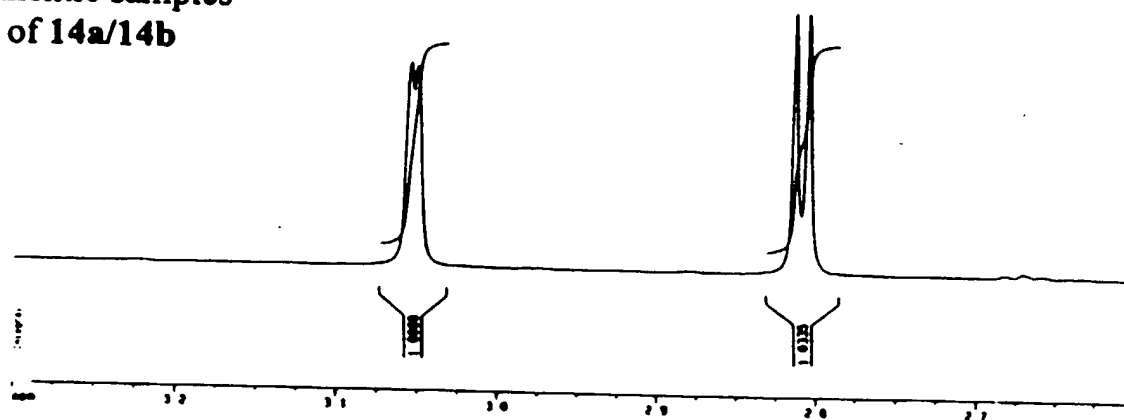


Fig. 43

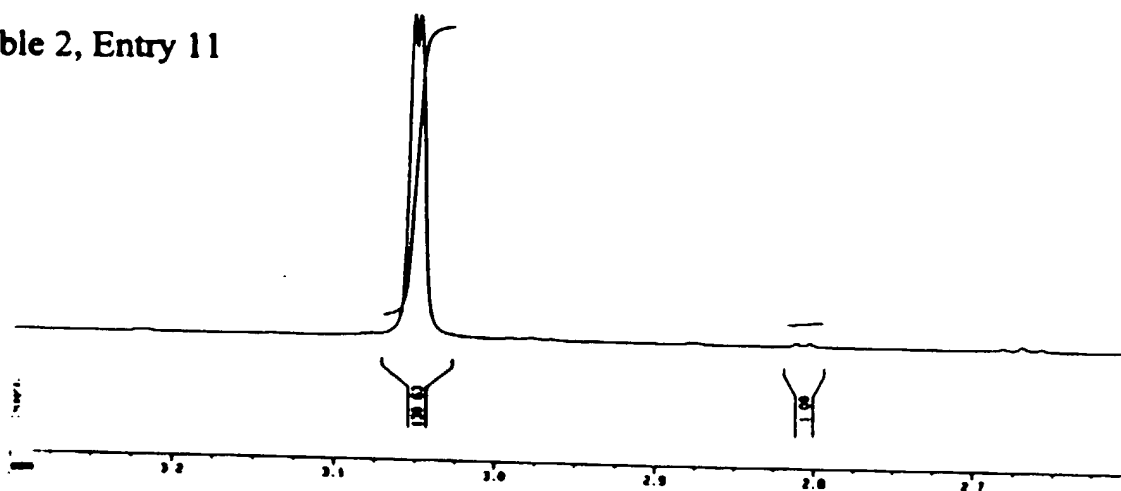


Fig. 44

Table 2, Entry 12

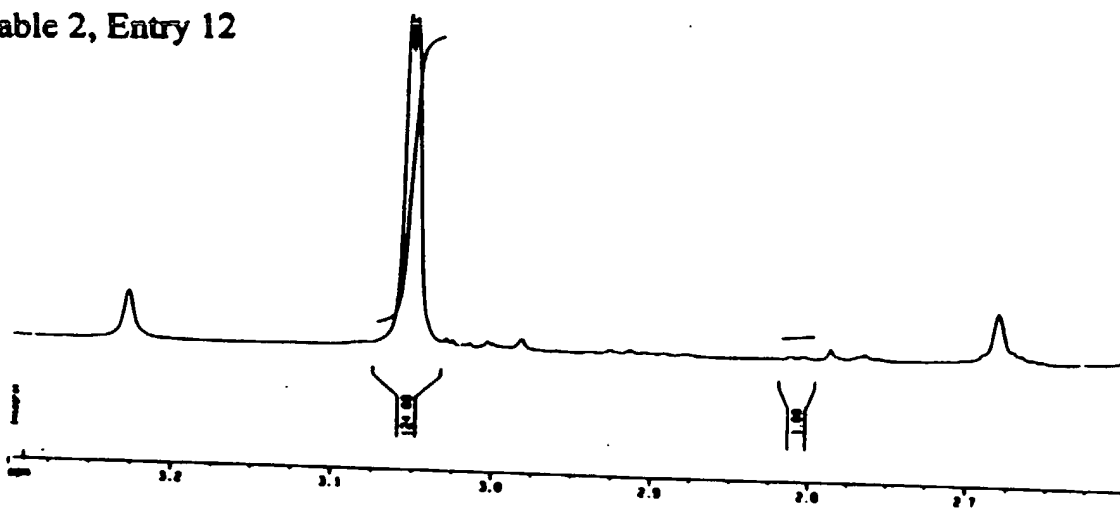
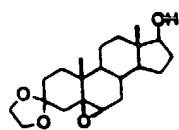


Fig. 45



15b

Table 2, Entry 13

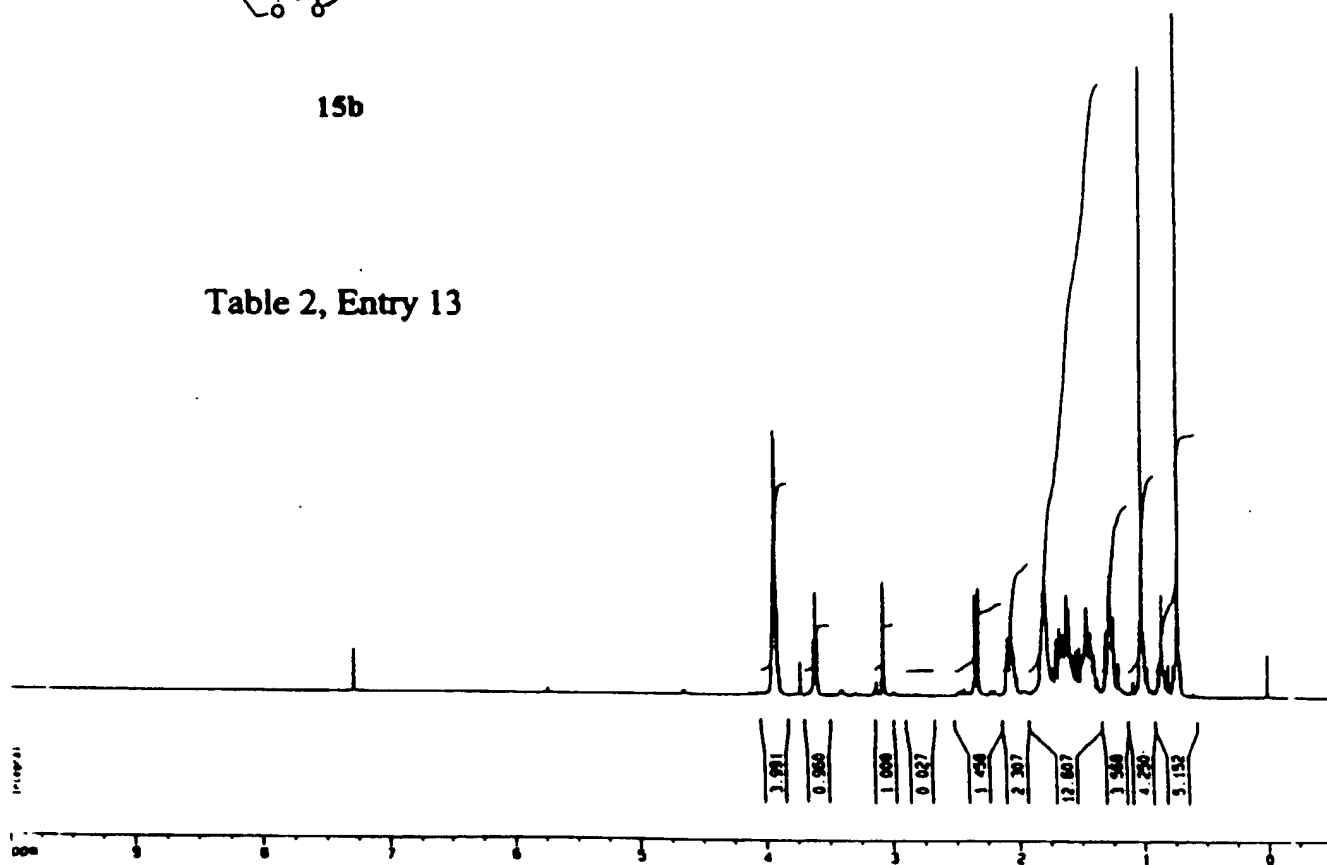


Fig. 46

Authentic samples
of 15a/15b

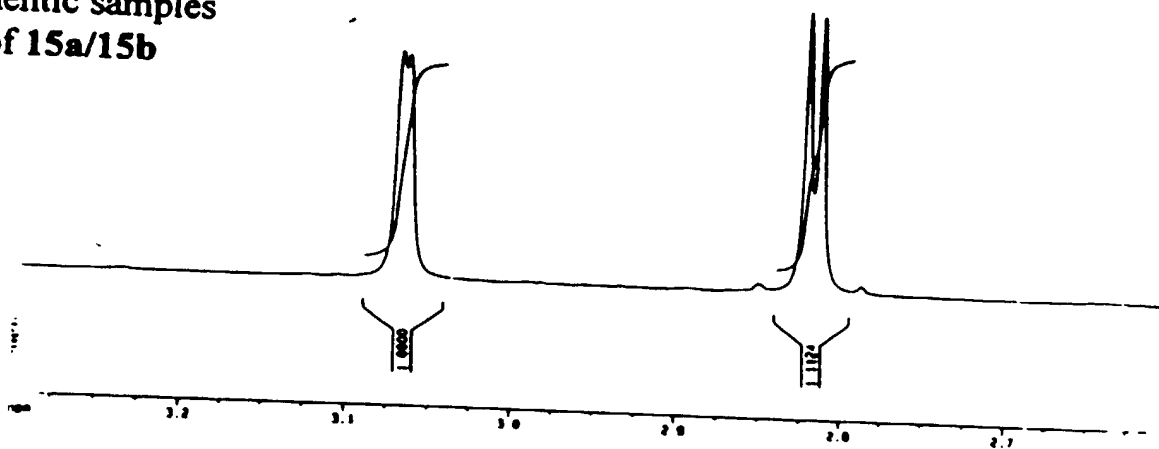


Fig. 47

Table 2, Entry 13

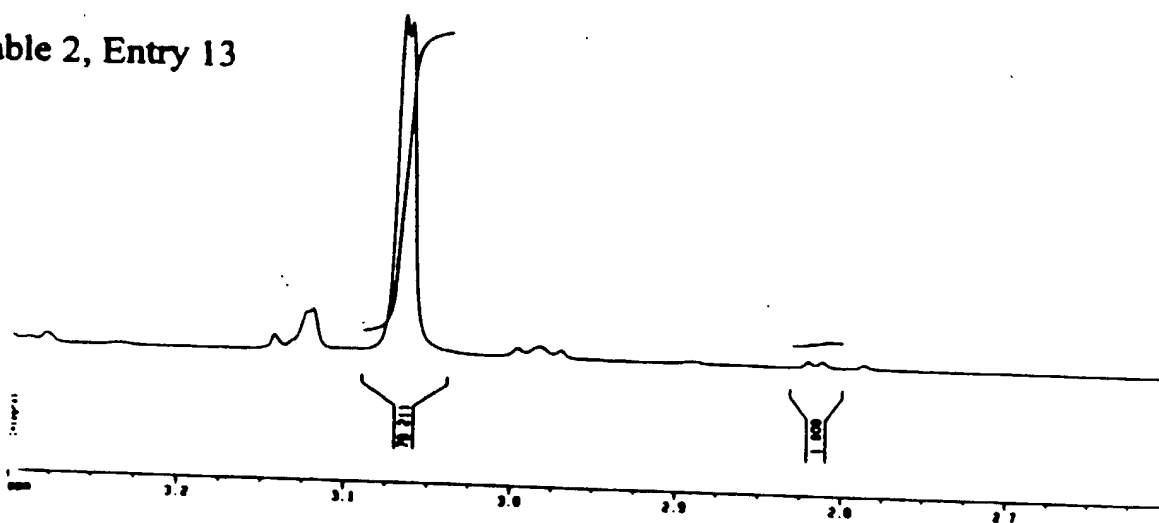


Fig. 48

Table 2, Entry 14

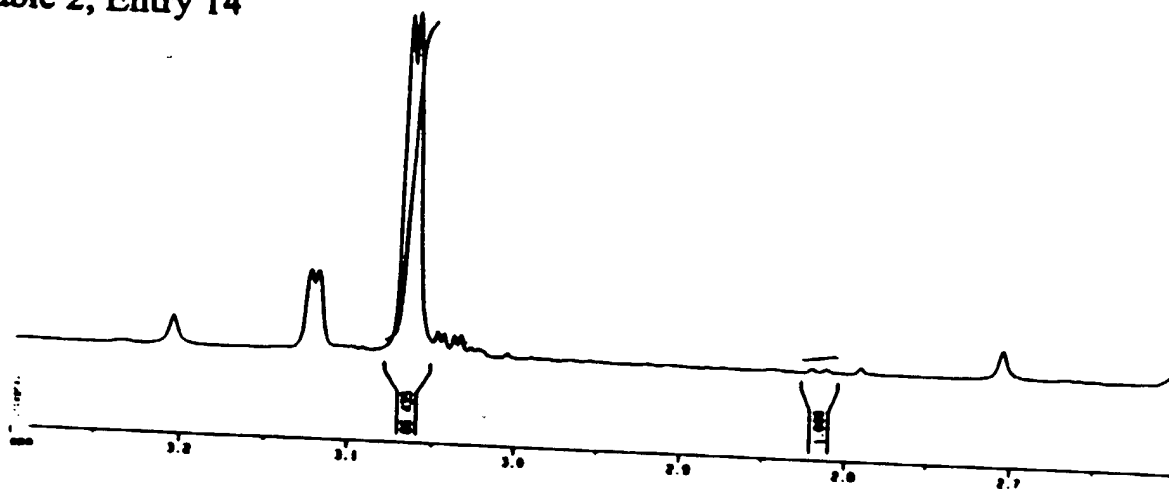
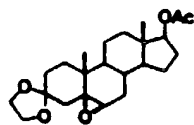


Fig. 49



16b

Table 2, Entry 15

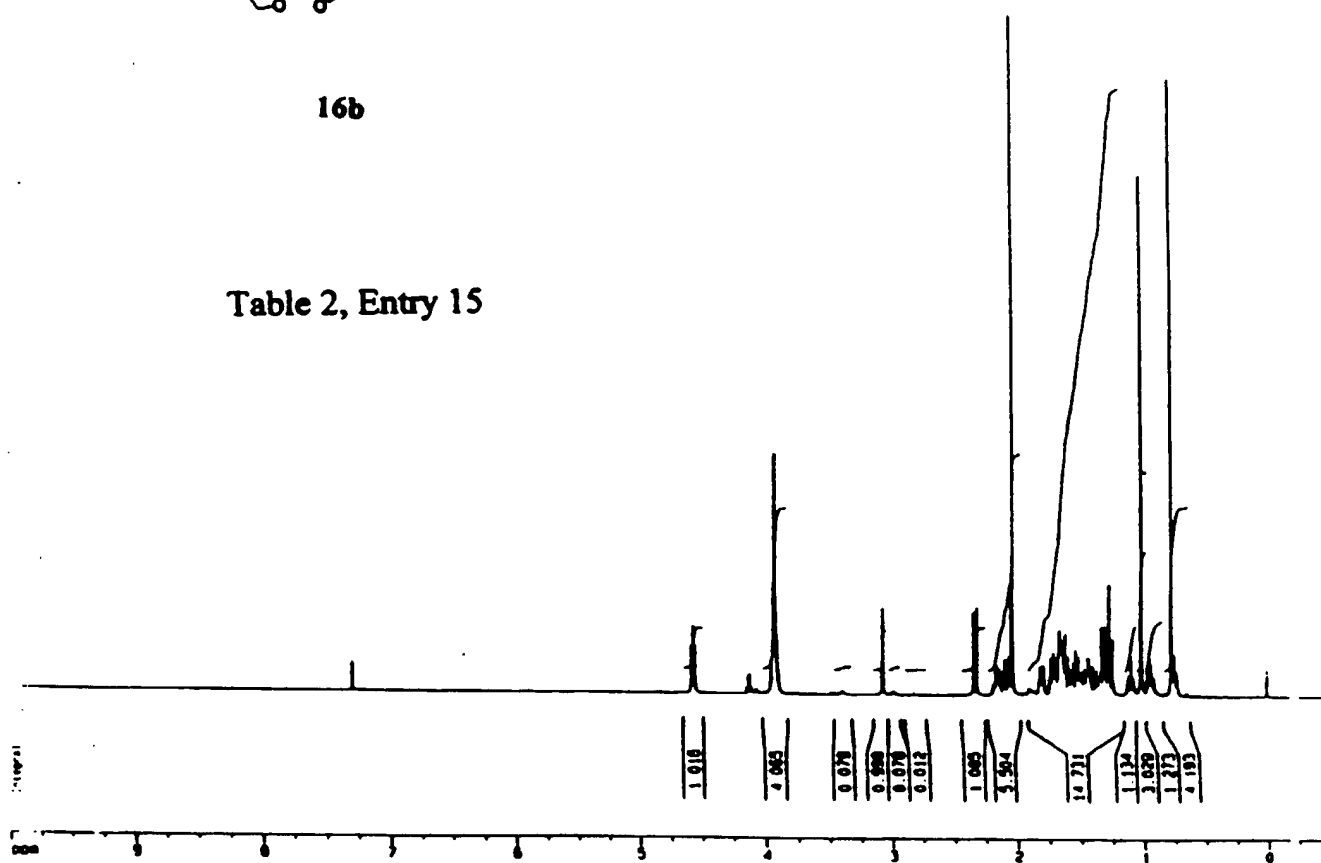


Fig. 50

Authentic samples
of 16a/16b

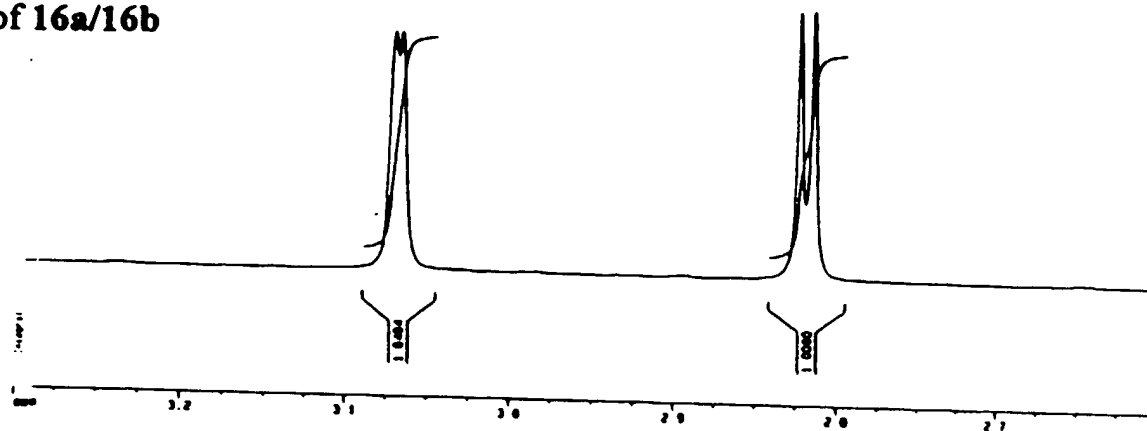


Fig. 51

Table 2, Entry 15

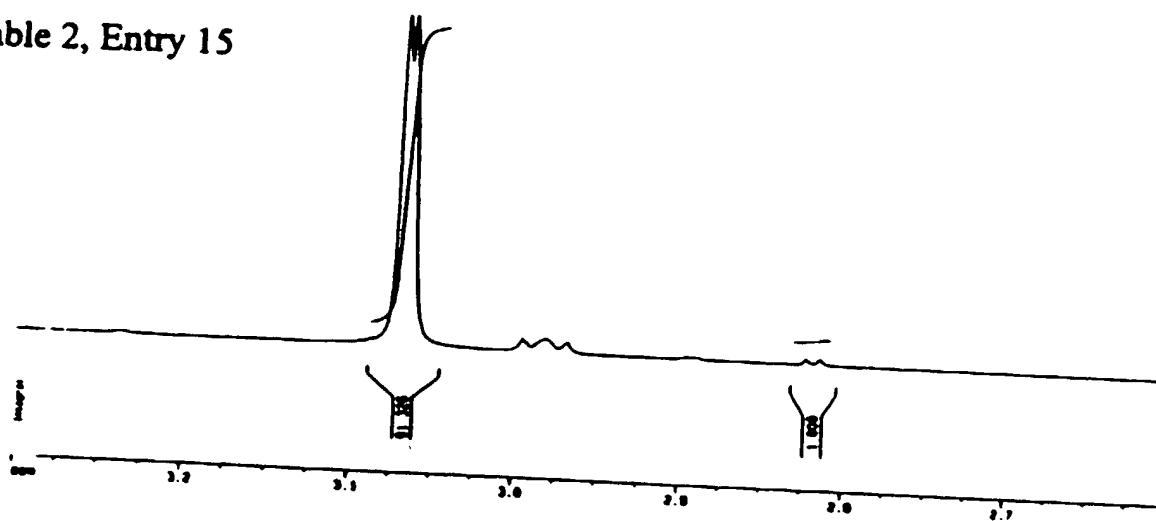


Fig. 52

Table 2, Entry 16

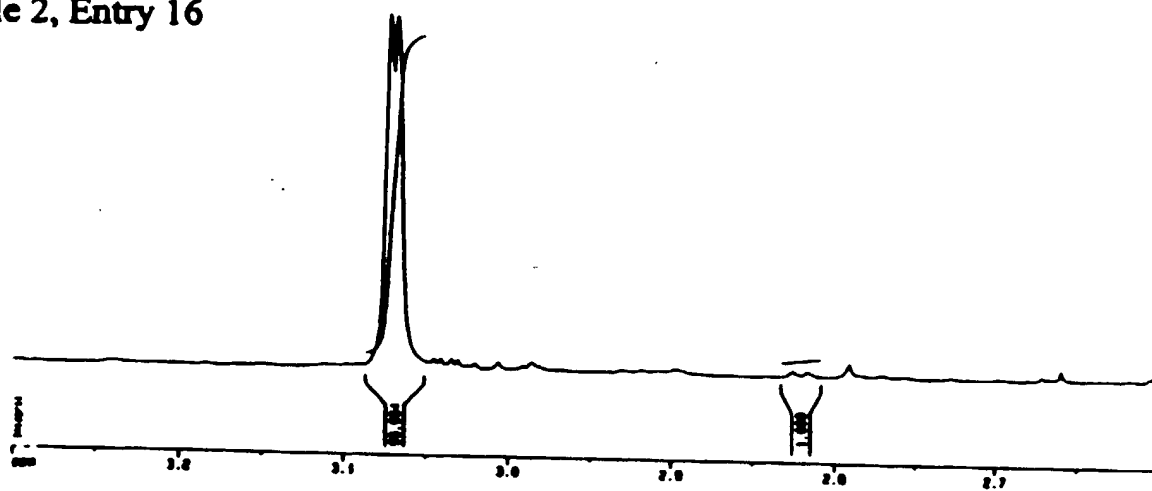
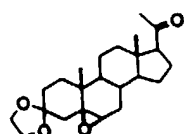


Fig. 53



17b

Table 2, Entry 17

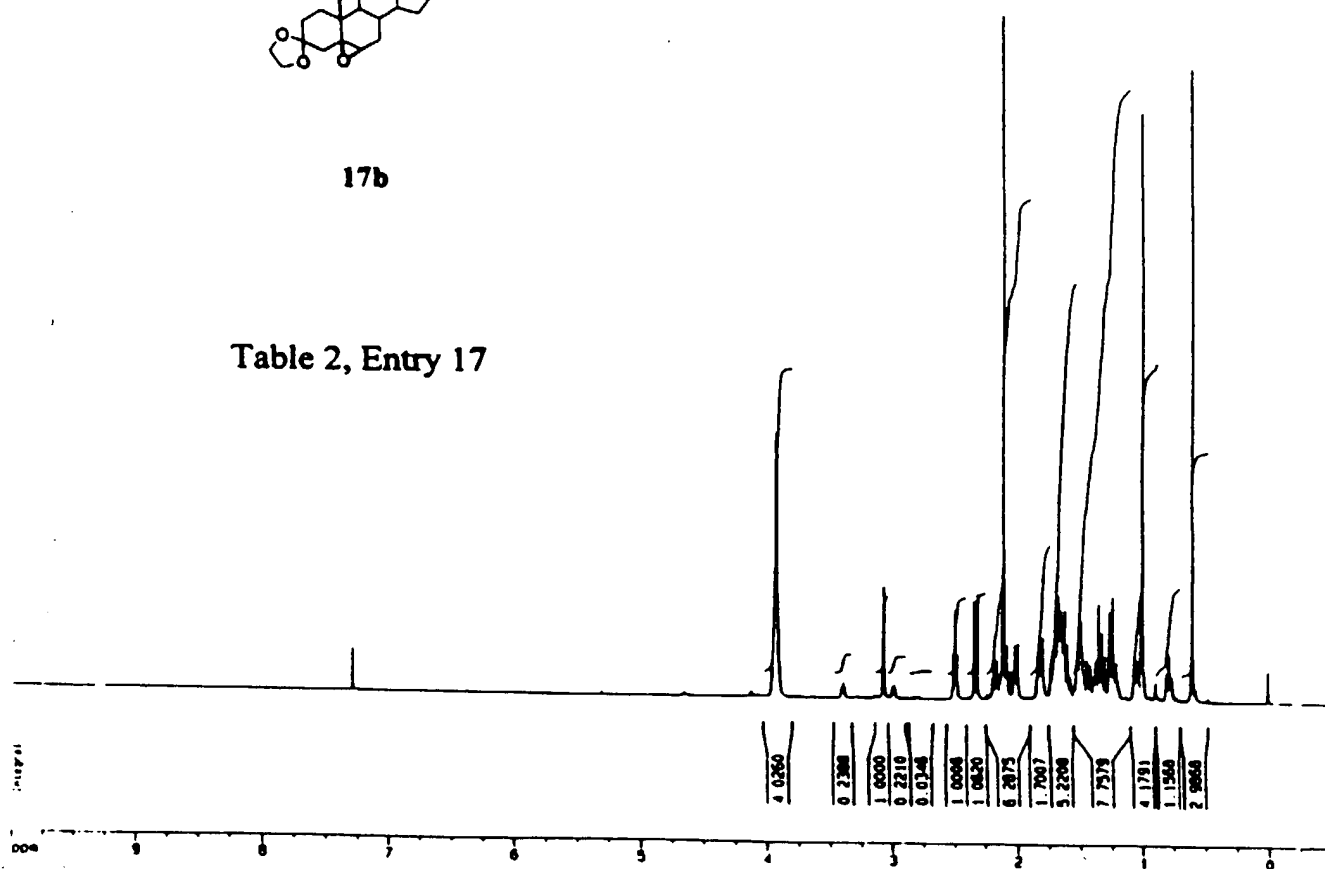


Fig. 54

**Authentic samples
of 17a/17b**

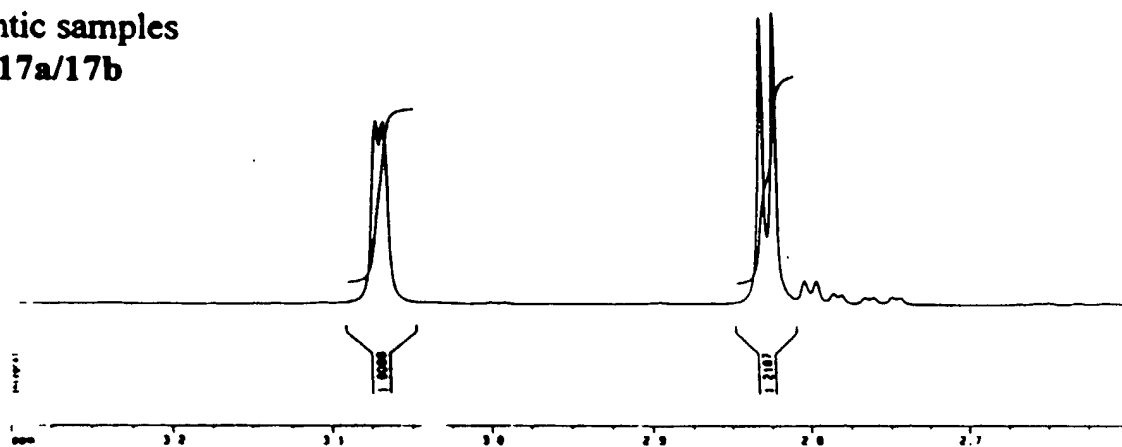


Fig. 55

Table 2, Entry 17

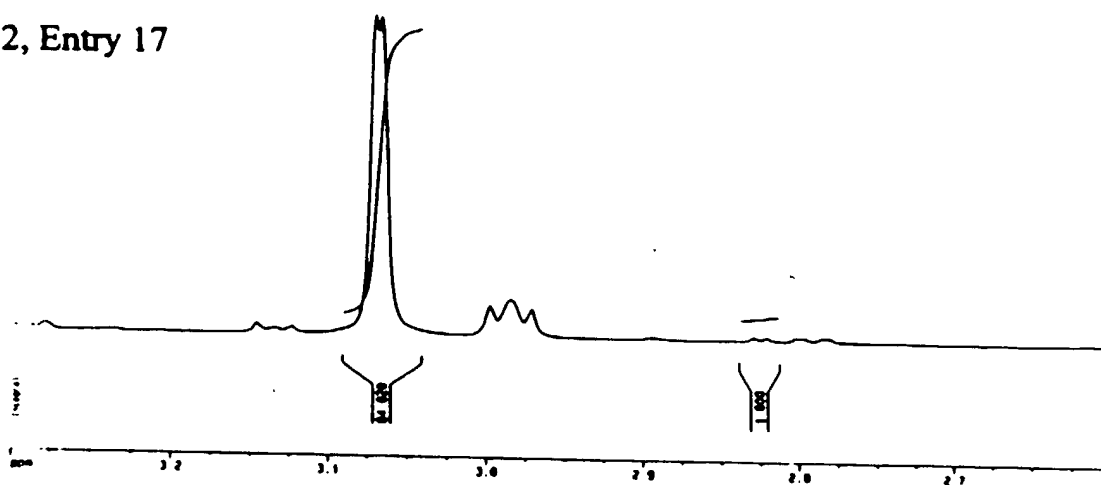


Fig. 56

Table 2, Entry 18

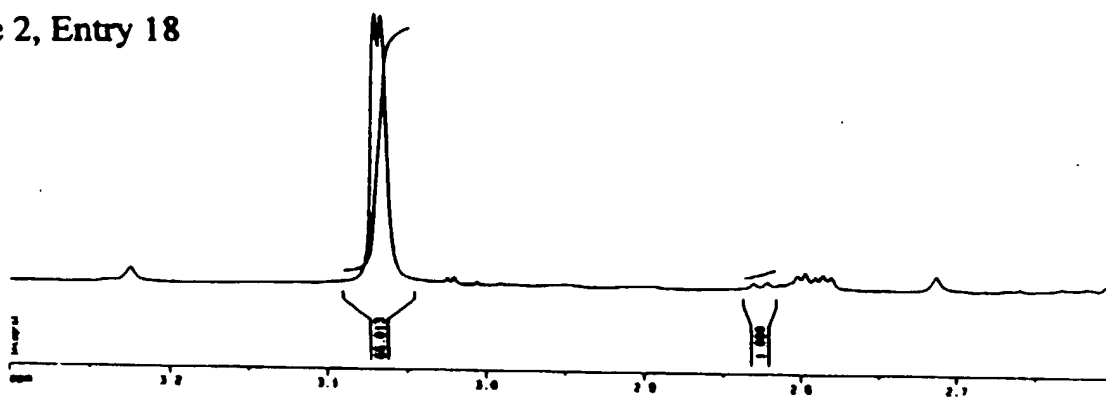
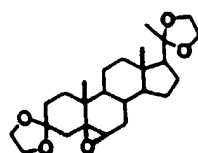


Fig. 57



18b

Table 2, Entry 19

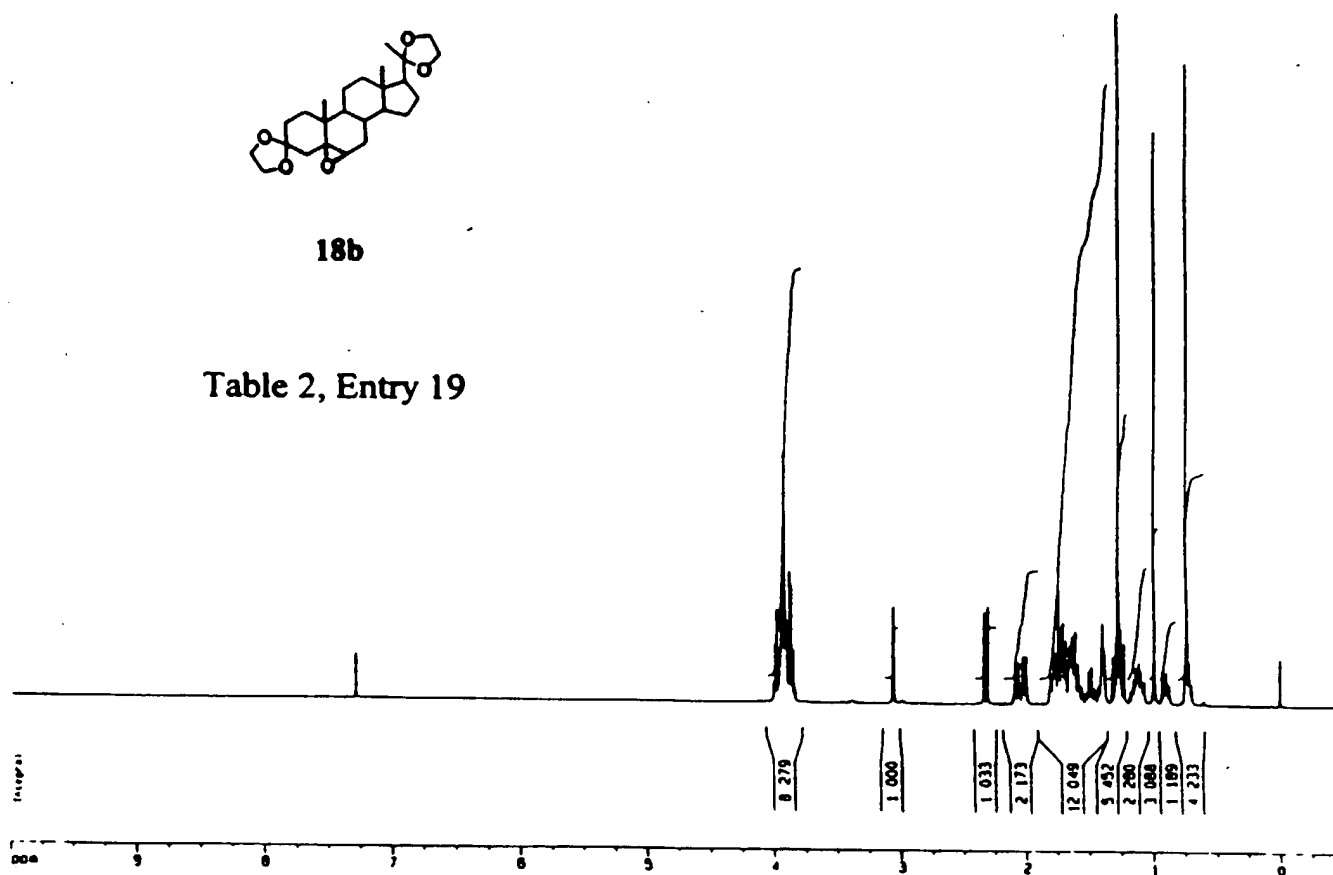


Fig. 58

Authentic samples
of 18a/18b

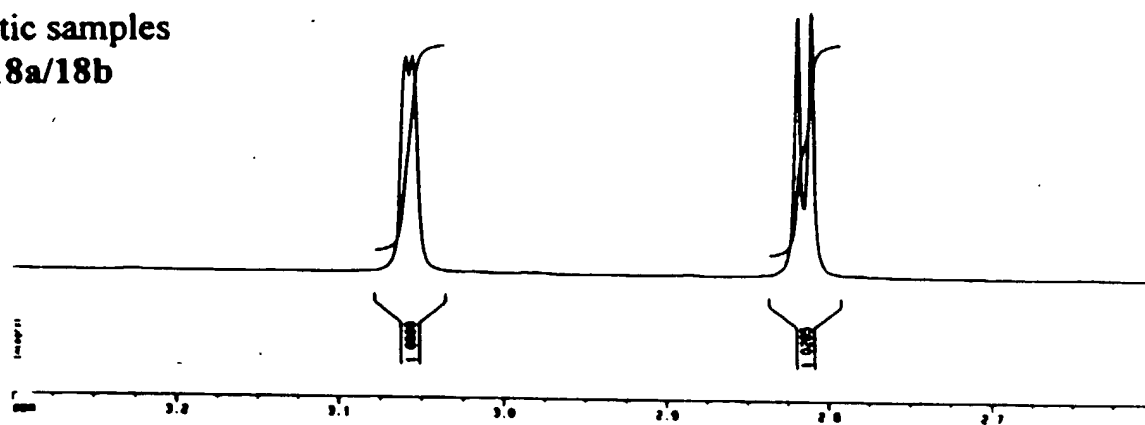


Fig. 59

Table 2, Entry 19

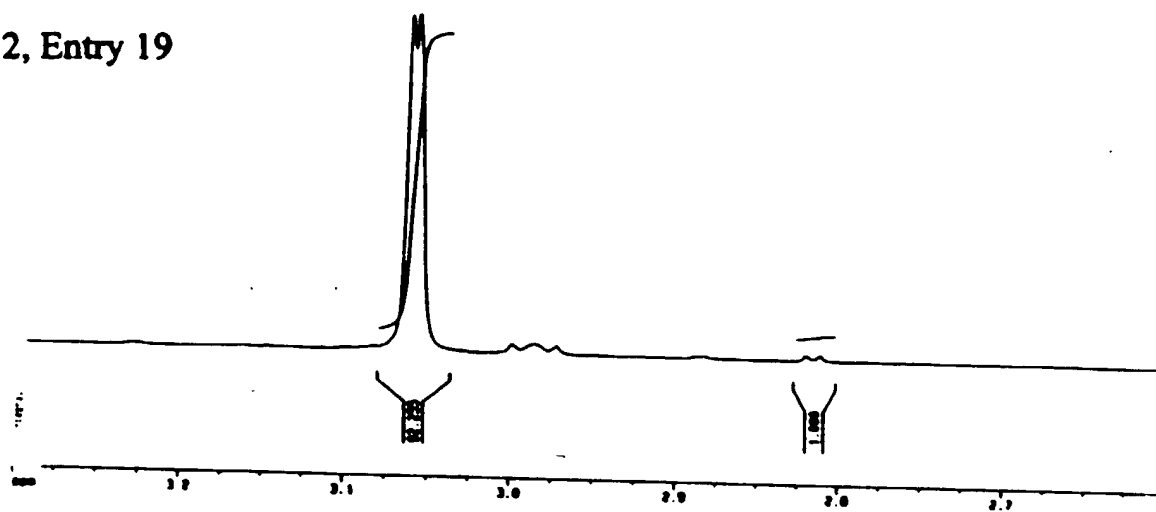


Fig. 60

Table 2, Entry 19

(10 mmol scale)

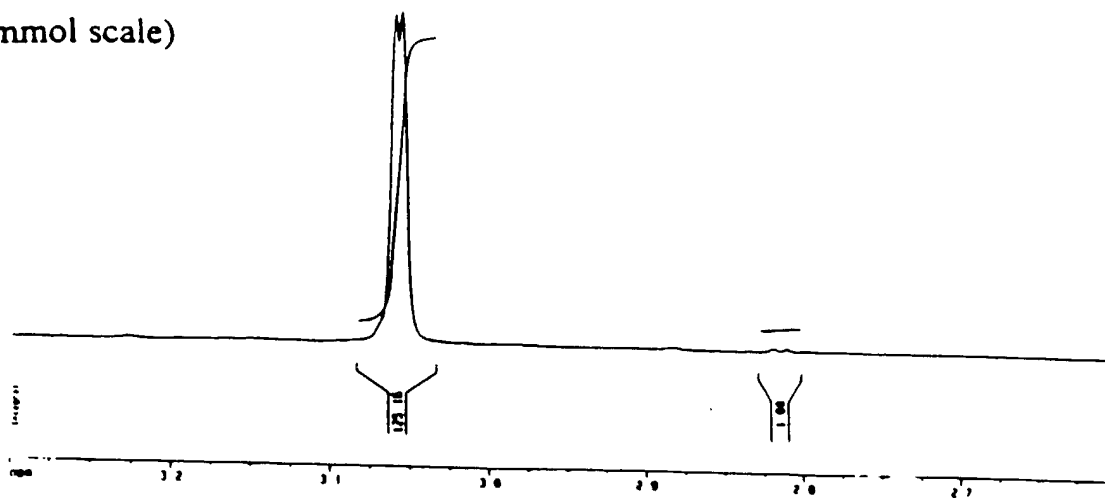


Fig. 61

Table 2, Entry 20

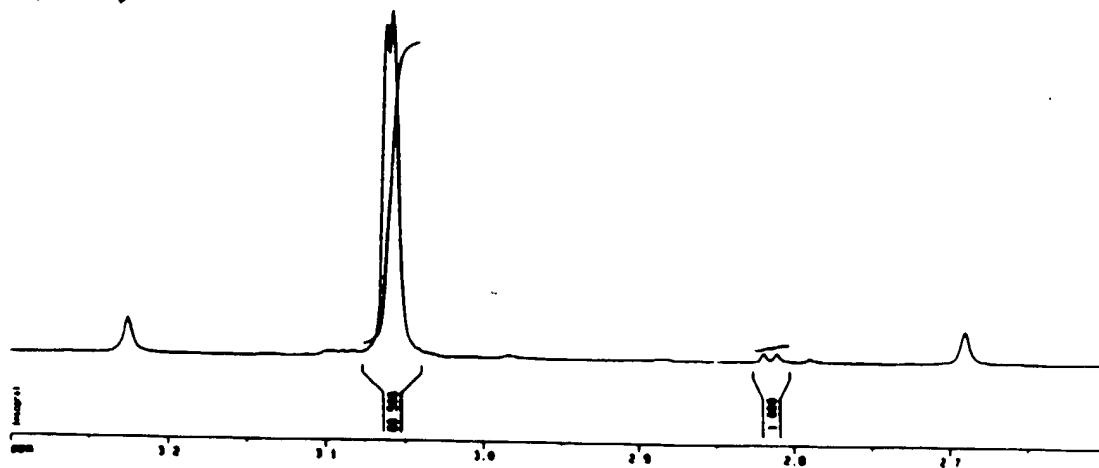
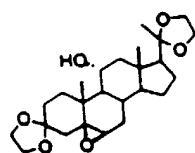


Fig. 62



19b

Table 2, Entry 21

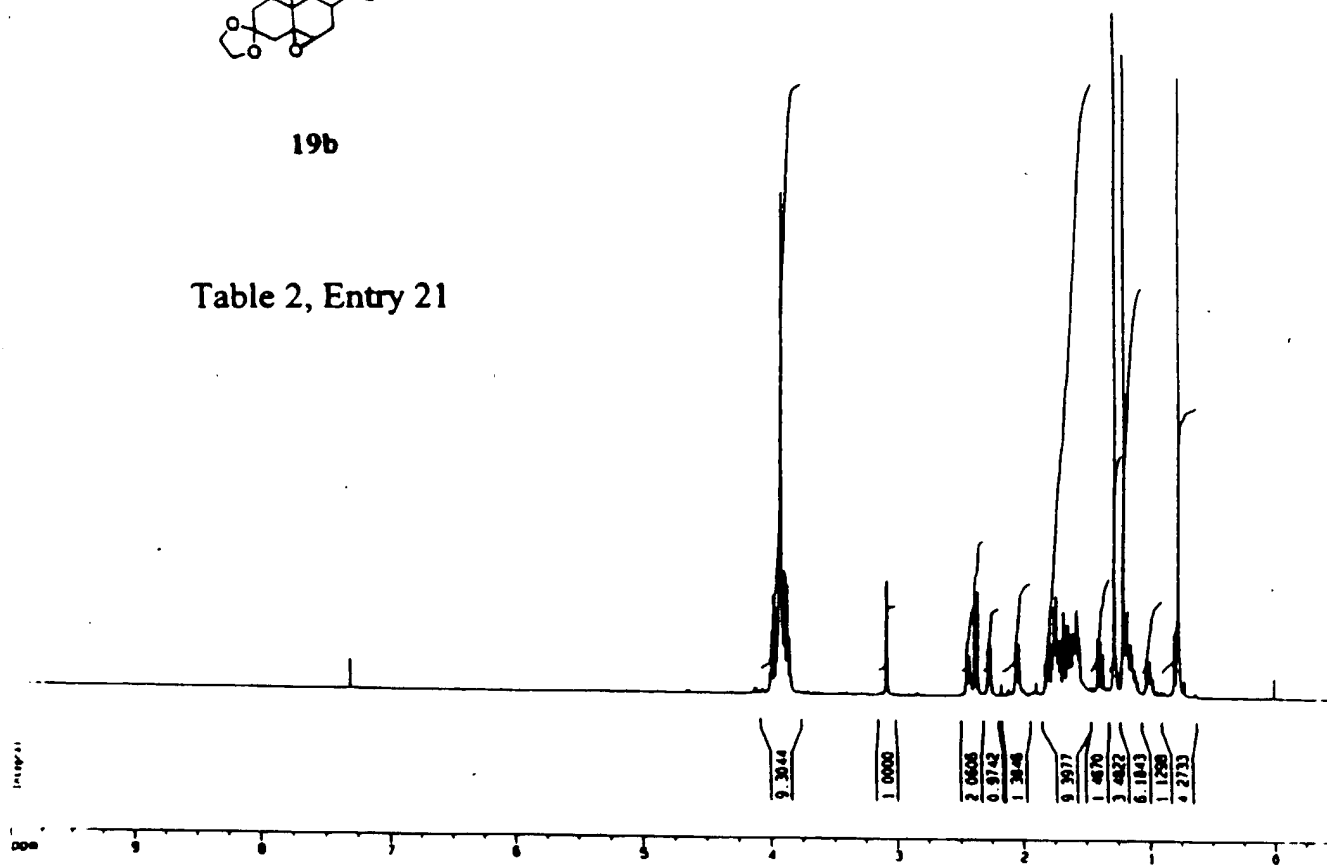


Fig. 63

Authentic samples
of 19a/19b

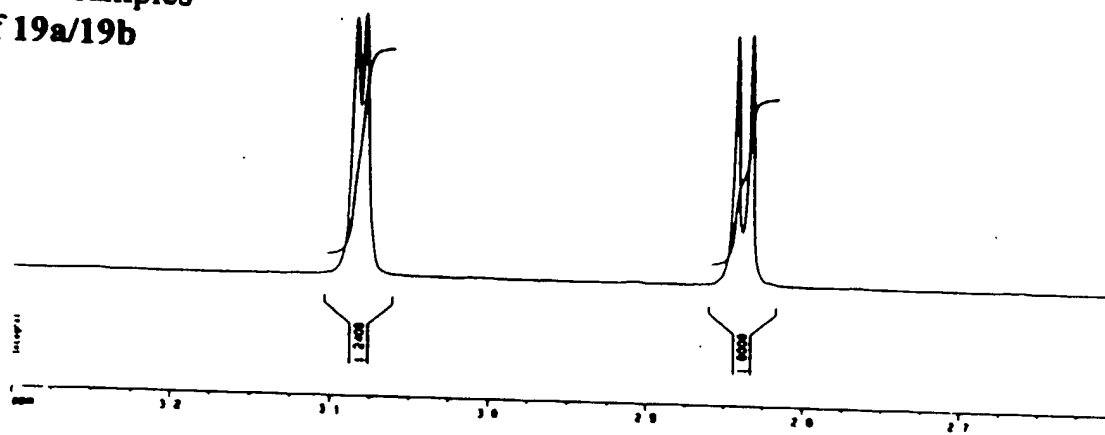


Fig. 64

Fig. 65

Table 2, Entry 22

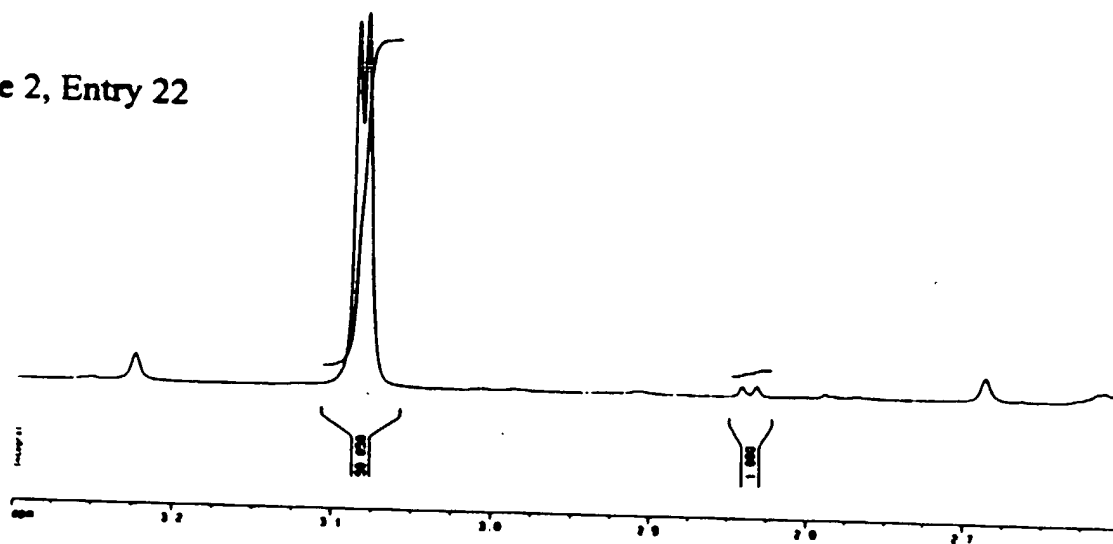
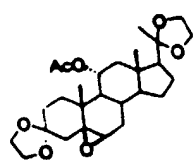


Fig. 66



20b

Table 2, Entry 23

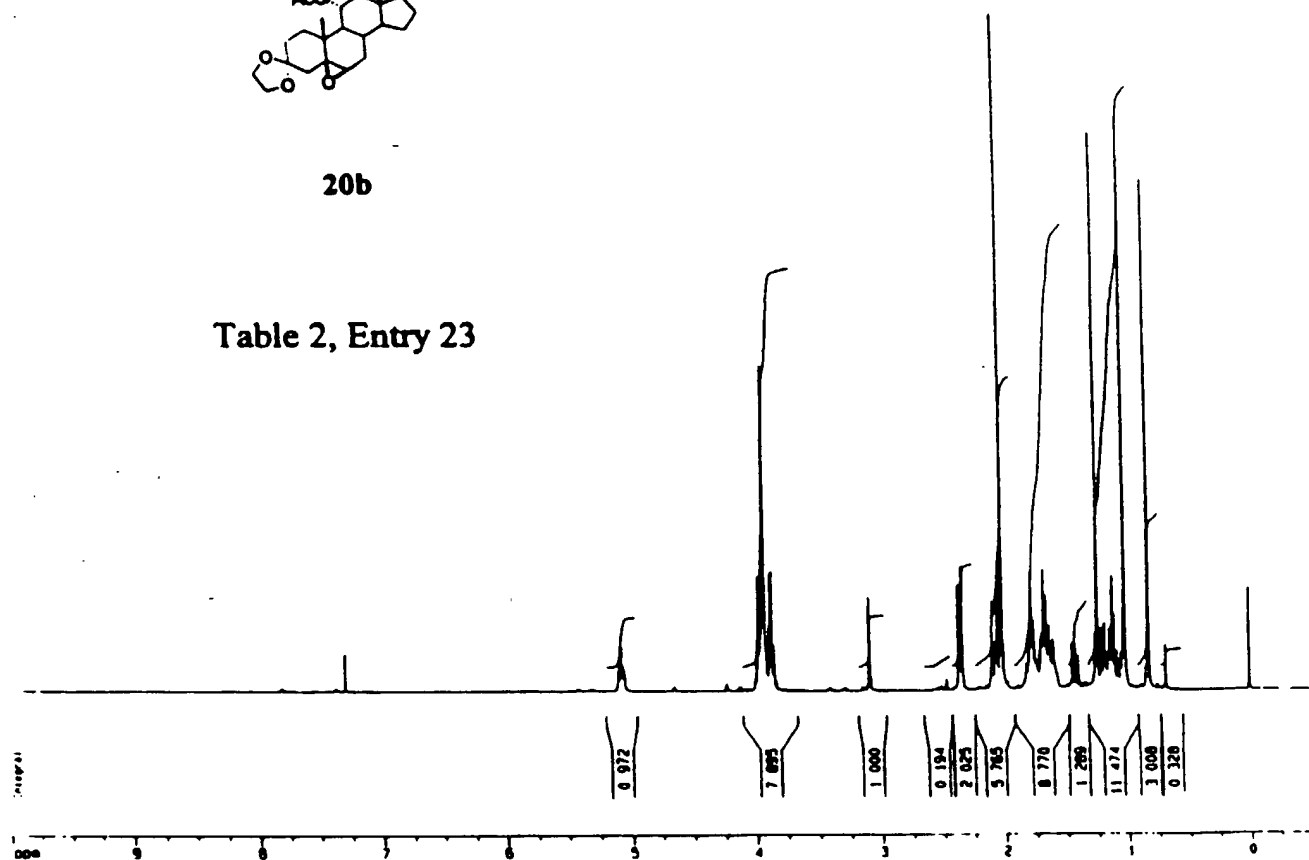


Fig. 67

Authentic samples
of 20a/20b

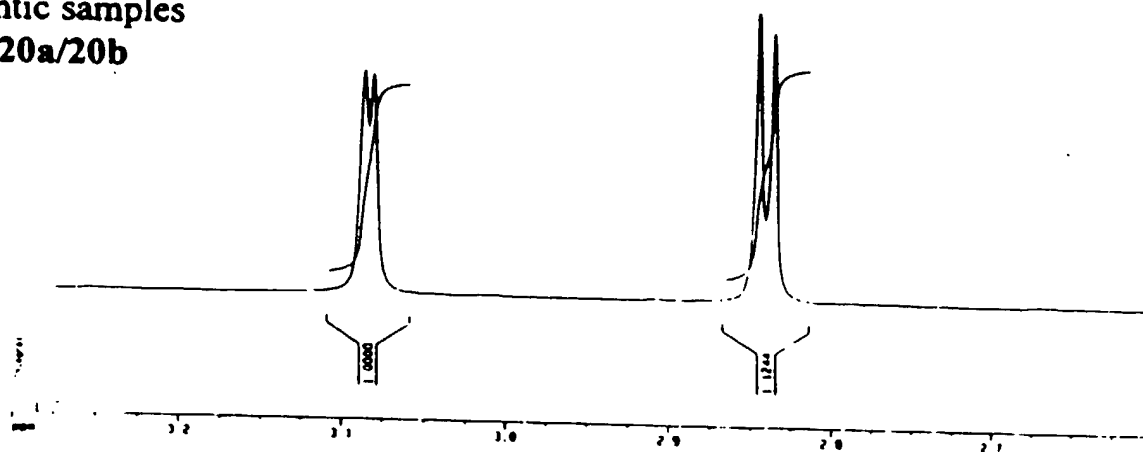


Fig. 68

Fig. 69

Table 2, Entry 24

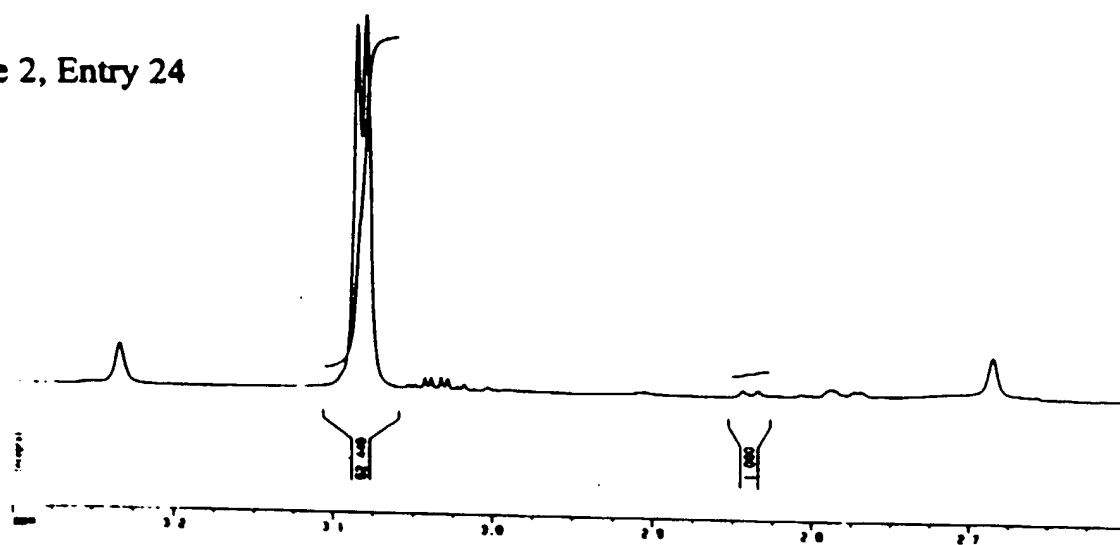


Fig. 70